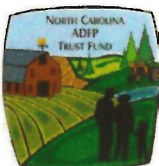


Watauga County Agricultural Development and Farmland Preservation Plan



December 2010

TABLE OF CONTENTS

Foreword	1
Acknowledgements	3
Introduction	5
Methodology	10
Community Visioning Process	11
Agriculture and Food System Mapping	15
Watauga County Profile.....	16
Watauga County Agriculture.....	19
Township Agricultural Assessments.....	22
Key Issue: Market Opportunities	27
Key Issue: Agricultural Education.....	34
Key Issue: Protecting Farming.....	36

Key Issue: Family Farm Transition Planning	36
Key Issue: New and Part-Time Farmers	38
Key Issue: Land Use Planning	39
Key Issue: Farmland Preservation	40
Key Issue: Food Security	43
Key Issue: Forestry.....	44
Farming Sector Summaries	46
Findings	59
Recommended Actions	61
Plan Implementation Matrix	66
Conclusions	68
Appendices.....	69
I List of Maps	
II Executive Summary	
III Watauga County Farmland Preservation Ordinance Summary	
IV Farmer Survey results	
V Sample Ordinance for Adoption of Agricultural Development and Farmland Preservation Plan	
VI Sources	
VII Summary Food and Farm Assessment	

List of Maps

Soils of Prime and Statewide Importance

Township Farm Summary

Local Agricultural Infrastructure

Christmas Tree Farms

Potential Agriculture District Growth

Farm Segmentation

FOREWORD

Watauga County is at an important crossroads – can the county grow as a High Country mountain retreat destination while retaining its community-based agricultural economy? What type of balance between growth and agriculture do the citizens of Watauga County want for their future? The purpose of the *Watauga County Agricultural Development and Farmland Preservation Plan* is to provide enough information about the current state of agriculture in the county for the residents and elected officials to take positive actions to answer this question.

Why should this Plan serve as a guiding document for current and future Watauga residents?

Watauga is losing farms and farmers.

- In the five years between 2002 and 2007, Watauga lost nearly 6,000 acres of farmland (12 percent of its total) and 144 farms (20 percent of its total) – the 4th highest loss in WNC, greater than Buncombe County around Asheville. ¹North Carolina led the nation in farmland loss in 2005, tied with Tennessee and Florida.²
- Watauga's agricultural lands total approximately 46,000 acres, or 23 percent of the 200,600 acres that make up the total land area of the county. The amount of open farmland has decreased steadily over the past 40 years as woodlands and developed areas have increased.
- The average age of Watauga County farmers was 59.3 years according to the USDA 2007 *Census of Agriculture*.
- Only 200 of Watauga's 587 principal farm operators listed farming as their full-time job according to the 2007 *Census of Agriculture*. Of the 587 farms 133 were retirement farms and 282 considered themselves residential/lifestyle farms. Residential/lifestyle and retirement farms accounted for 27,612 acres of farmland out of 45,782 acres in the 2007 *Census of Agriculture*.

Watauga's economy is increasingly based on tourism, Appalachian State University, and a regional medical center.³

- Between 1990 and 2008, Watauga's population is estimated to have grown by 20%.
- Tourism pumped \$191 million into the county's economy in 2007 and \$189.76 million in 2008.⁴
- Appalachian State University is the largest employer in the area with a student enrollment of over 17,000. The estimated economic impact of ASU on the local economy in 2006 was \$506 million⁵.
- Approximately 1/3rd of all new building permits are for seasonal housing⁶.

¹ 2007 Census of Agriculture – Watauga County Profile, USDA

² NC Department of Agriculture and Consumer Services, Press Release, February 19, 2007

³ Watauga County Economic Development Commission (www.wataugaedc.org)

⁴ Ibid

⁵ Ibid

Agriculture is diversifying and demand for local/regional foods is growing in WNC.

- Sales of farm products were estimated to be \$11.5 million in Watauga in 2007, outpacing inflation with a 24 percent increase in average sales per-farm between 2002 and 2007.
- The growth of small farms producing and direct-marketing vegetables, fruits, meats, and specialty products in the county has increased substantially in recent years.
- Farmers have increasing options for processing and direct marketing of local beef.
- The Choose-and-Cut Christmas tree industry generates a total economic impact of as much as \$14 million in sales and related business in a given year.⁷
- Commercial Christmas tree production is an important income source for many of Watauga's farms, with cut trees ranking as the county's number one crop in sales (\$4.196 million) and number two agricultural land use in acres (2,795)⁸
- A 2007 *Growing Local* study estimated \$452 million in unmet demand each year for farm products in WNC, including \$36 million in demand for local fruits and vegetables, and an overall willingness to pay more for local foods and support local farms.⁹
- Increasing agritourism, such as farm-based bed-and-breakfasts, choose-and-cut operations, restaurants serving local food, and farm dinners are all signs that tourism and agriculture can work together to make Watauga a known destination for mountain-grown foods.
- Watauga County is well-positioned to participate in the local food economy for much of WNC, eastern Tennessee, and southwest Virginia, considering that the USDA denotes that local agriculture can include up to 400 miles between farm products and markets.

Residents, business owners, and elected officials in Watauga and other parts of Western North Carolina can work together to create a vibrant agricultural and food economy for the region. Watauga's agricultural sector is influenced by national and global markets and forces, real estate markets, government agencies, and retail and wholesale food markets. Key players in the local food system -- farmers, processors, distributors, grocers, farmers markets, restaurants, institutional food buyers, and consumers, all have a direct hand in shaping Watauga's agricultural future.

By preparing and distributing this *Watauga County Agricultural Development and Farmland Preservation Plan*, Watauga County is collecting community-based information from farmers, local residents, food-related businesses, and others about the current state of agriculture, issues and concerns, and opportunities for the community to use in making informed decisions about its agricultural future.

⁶ Ibid

⁷ Ibid

⁸ 2007 Census of Agriculture – Watauga County Profile, USDA

⁹ Growing Local: Expanding the Western North Carolina Food and Farm Economy. Appalachian Sustainable Agriculture Project, 2007

ACKNOWLEDGEMENTS

The Project Team wishes to thank the many farmers, citizens, and employees of Watauga County who gave freely of their time and opinions in support of local agriculture, past, present and future. With much appreciation we also thank the Watauga County Commissioners, County Manager and staff, and the North Carolina Agricultural Development and Farmland Preservation Trust Fund board members and staff for their vision and support. This Plan was prepared with a grant from the North Carolina Agricultural Development and Farmland Preservation Trust Fund.

In addition, the following partners supporting local agriculture are recognized for their commitment to Watauga's farming future:

Appalachian State University's Sustainable Development program

Blue Ridge Women In Agriculture

High Country Conservancy

High Country Community Supported Agriculture

Maverick Farms

New River Organic Growers

Watauga County Christmas Tree Growers' Association

Watauga County Cattlemen's Association

Watauga County Farmers Market

Watauga County Farmland Preservation Board

Watauga County Cooperative Extension

USDA-Natural Resources Conservation Service and Farm Service Agency

Township surveys were coordinated by Mary Scott and Brian Chatham. The Project Team wishes to thank all of the volunteers who helped to collect information on farming in the different townships.

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Jeffrey Scott, Unique Places

Charlie Jackson, Appalachian Sustainable Agriculture Project

Allison Perrett, Appalachian Sustainable Agriculture Project

Portions of the Farm Transition Section adapted the text of the North Carolina Farm Transition Network's *Planning the Future of Your Farm: A Workbook on Farm Transfer Decisions*. (2nd Edition) The full text of this document can be viewed at:

<http://www.ncftn.org/planning/Planning%20the%20Future%20of%20Your%20Farm%202d%20Edition%20ver%202.0.pdf>

Portions of the Farmland Preservation Section adapted the text of American Farmland Trust's *Planning for an Agricultural Future: A Guide for Farmers and Local Governments*. The full text of this document can be viewed at:

http://farmlandinfo.org/documents/31721/FINAL_NCP4Ag_AFT.pdf

INTRODUCTION



Cut hay near Todd

Executive Summary

The Executive Summary is attached as Appendix II of this Report and is designed as a stand-alone, easily reproducible 4-page 11x17 fold-over handout with pictures and key issues on the cover, Local Farm and Food Infrastructure map and listings in the middle, and Challenges and Recommended Actions on the back page.

Overview

Watauga County is at an important crossroads in its 161 year history as a mountain community. The average age of Watauga farmers is around 60 years old, and many of those farmers likely do not have transition plans in place for their farms or children interested in taking over the farm as a full-time occupation. Farms are often the only major asset that farmers can rely on to cover their retirement costs. Given these factors, it is likely that much of the agricultural land in the county will change hands in the next 10 to 15 years.

At the same time, the High Country is becoming an increasingly popular destination for tourists, retirees, and seasonal residents moving in from the Southeast and beyond, with development pressure for resorts, seasonal homes, and retirement communities steadily growing. Along with this growth and the fragmentation it brings for agricultural landscapes, new opportunities are also emerging. Demand for fresh local food has increased, offering farmers more diversified alternatives to commodities such as cattle and tobacco. Much open land remains available for farming in Watauga County, and local food production can be expected to occupy a relatively small portion of this acreage. Land held as an investment is generally managed for timber, farmed by its owner, rented for Christmas trees or cattle, or lies fallow. In addition, farmland owned in conjunction with full-time and seasonal homes may be available for affordable leases to beginning farmers as an alternative to leaving it fallow or cutting hay.

While interest in producing and purchasing fresh, local food, land prices are rising out of reach for many new and beginning farmers, particularly for relatively level land with good soils that are both good for farming and for building. Land use needs for wildlife, timber, recreation, farming, and residential and commercial development often must compete for the same acres. Farmland preservation has proven an essential part of the picture for ensuring Watauga's agricultural future; however, meeting the needs of farmers to preserve farming as a way of life is the most fundamental challenge to be addressed. One of the key questions that remains is this: if Watauga's citizens seek to retain agriculture as a vital part of life in the county, what acreages of land and number and types of farms and farm services are required?

As stated in the *Agricultural Development and Farmland Protection Plan for Buncombe County*, "preserving farmland is hard to justify if farmers still can't make a living on it."¹⁰ Farms in mountain landscapes tend to be smaller than the rest of those in the state, and therefore don't compete as well for growing bulk commodities. Farm profitability is essential to help keep the present generation of farmers on the land and to attract the next generation of farmers to this way of life. Land ownership and farming are two separate decisions. Much of the farmland in Watauga is held as an investment. Land values across much of North Carolina are tied to urban growth and development pressures rather than agricultural or forestry values. Open land retained as an investment is often leased for farming and/or forestry.

This Plan presents strategies for meeting both the needs of preserving both farmland and farming. Protection of farmland through voluntary conservation measures helps to ensure that agricultural landscapes remain intact for current and future farmers, yet the scenic and lifestyle qualities of rural open space are also a public good which many residents and visitors value. Watauga may face increasingly important decisions about the cost of preserving open space, including farmland, for the public good.

It is with the need to address these challenges in mind that the preparation of the *Watauga County Agricultural Development and Farmland Preservation Plan* is presented to the community. The Actions recommended herein are tailored to specifically address the Key Issues and Opportunities identified by participants from across the county in a series of Community Visioning Workshops, Farmer Surveys, and interviews. These Actions are presented in a manner that can directly support individual and community efforts to plan, finance, and implement specific projects and partnerships designed to strengthen Watauga's agricultural economy.

As outlined by the North Carolina Agricultural Development and Farmland Preservation Trust Fund, an Agricultural Development and Farmland Protection Plan shall:

- List and describe existing agricultural activity in the County
- List existing challenges to continued family farming in the County
- List opportunities for maintaining or enhancing small, family-owned farms and the local agricultural economy
- Describe how the County plans to maintain a viable agricultural community and address farmland preservation and agricultural economic development
- Include a schedule for implementing the plan and possible funding sources

¹⁰ Agricultural Development and Farmland Preservation Plan for Buncombe County

The Watauga Plan has 3 main steps:

- 1) Community Visioning Process
- 2) Report Preparation
- 3) Implementation

With the completion and distribution of this Report, the first two steps are complete. The third step of Implementation is an ongoing process that can guide agricultural funding and land use decisions in Watauga for years to come.

Agricultural Economy Snapshot

Watauga County's \$11.5 million agricultural economy is currently centered around:

- 1) Beef cattle production (9,800 head, 8,000 acres in hay, 8,535 acres of harvested cropland). As of 2002, the value of cattle in the county was \$4.048 million.
- 2) Christmas tree farms (the county's main cash crop and a key link to agritourism) occupied 2,795 acres in 2008, with \$6.16 million in nursery, greenhouse and floriculture production according to NCDA-Agricultural Statistics Division.
- 3) An increasing amount of local vegetables, orchards, vineyards, nurseries and niche crops such as berries, wool, and hops.
- 4) In the past, the area was known for cabbage production for sauerkraut and some burley tobacco. The Plan will assess the current viability of these products in light of rising farmland prices (which in some cases have exceeded \$12,000/ac) and changes in farm ownership, and outline the county's agricultural future.

Voluntary Farmland Preservation Program

The Watauga County Voluntary Farmland Preservation Program was established in 2000 with a County Ordinance creating a Voluntary Agricultural District. To date, 138 landowners have joined the district, providing 10-year protection for more than 9,490 acres of farms, roughly 19 percent of the county's total of 731 farms comprising 51,758 acres. These acreages are shown on the Potential Agriculture District Growth map.

Expanding Markets for Watauga Farm Products

Farmers in Watauga County have a growing number of options for selling farm products including: on-farm sales, roadside stands, the popular Watauga County Farmers Market (over 100 vendors and growing), distributors such as New River Organic Growers and Eastern Carolina Organics, community supported agriculture (CSA) including the multi-farm High Country CSA, sales to restaurants, groceries, and institutional food buyers (ASU, Watauga County Schools, Watauga Medical Center), and agritourism to bring more visitors to farms.

Educating the Next Generation of Farmers

The children of local farmers and the newly-trained graduates in Sustainable Development both have great potential to use their knowledge for the betterment of Watauga's agricultural economy, in an area where the average farmer is 62 years of age. We need the next generation of farmers, and this next generation needs farmland. Watauga County Cooperative Extension runs a series of 4-H and family-gardening programs that teach younger generations where their food comes from, Watauga County's high school has an active Future Farmers of America (FFA) chapter, and each year, Appalachian State University in Boone graduates 20+ students from its Sustainable Development Program with training at its Teaching and Research Farm and Agro-Ecology Lab.

Benefits of a Local Food Economy in Watauga and the High Country

The many benefits of a strong local food economy in Watauga include economic growth for farm families and communities, environmental conservation, retaining rural heritage, potentially reducing dependence on fossil fuels and generation of greenhouse gasses associated with shipping food, protection of open space, tax savings, and promoting healthy lifestyles and community-building. However, in many parts of the county, the local food economy must contend with the often stronger force of economic growth associated with the demand for non-agricultural uses such as housing, commercial and tourism uses. This growth also provides opportunities for Watauga County's remaining farms, opening new markets for farm products.

Watauga County's assets for building a strong local food economy include diversifying agriculture, a superior educational system, an adaptable workforce and an ever-expanding and diverse set of dedicated partners. If all North Carolinians spent only 10% of their food dollars on local foods (\$1.05 per day), an estimated \$3.5 billion would be available for the local economy each year – supporting local farms and farmers, benefitting local food businesses, and creating jobs in our communities instead of going to out-of-state farms and food businesses. This same 10% figure for the High Country would generate similar improvements in income for local farms and food businesses in Watauga and surrounding counties.

The markets for organic and local are hot – with organics the fastest growing food sector, estimated at nearly \$25 billion in national sales each year, with local food sales estimated to reach \$7 billion by 2011.¹¹ How can Watauga farmers capitalize on these national and regional trends while keeping local foods affordable and keeping farming a viable livelihood?

The Appalachian Sustainable Agriculture Project (ASAP) report, *Growing Local*, estimates that at least \$37 million in unmet demand for local produce exists in Western North Carolina (WNC), and as much as \$432 million in unmet demand exists for all farm products (including meat and dairy) in this part of the state. What is Watauga's role in producing food for that untapped market, and how can communities and individuals benefit from the growing local food economy? These are key questions to be addressed in this Plan.

One example of the benefits of a strong local food economy is job creation and economic development. Clearly, jobs and job growth in Watauga are most closely tied to tourism, Appalachian State University and residential and commercial development, however, strengthening the relationships between local food production and these other economic sectors can strengthen Watauga's place in the WNC regional economy. This is significant in Watauga County, where an estimated 18.9 percent of residents were living below the poverty level in 2008, a figure that is 50 percent higher than the average for WNC. The number of farms in the county dropped by 20% in just 5 years, from 731 in 2002 to 587 in 2007. During that same period however, farm income from the sale of vegetables in Watauga increased by over 125 percent and the number of fruit and nut farms jumped from 14 to 25. The average value of farm products sold per farm rose from \$15,889 in 2002 to \$19,641 in 2007, an increase of 24%.

As farms and farm income grows and expands in the county, on-farm jobs growing food, and jobs in processing and distribution of farm products also expand. As jobs and local businesses grow, more money from local food sales circulates in the economy. The Business Alliance for

¹¹ From Farm to Fork: A Guide to Building North Carolina's Sustainable Local Food Economy, Jennifer Curtis, et. al. April, 2010. a Center for Environmental Farming Systems report.

Local Living Economies (www.livingeconomies.org) includes numerous studies from around the country documenting that from 40 to 65 percent of every dollar spent with local businesses stays in the local economy, whereas less than half of that amount (as low as 11 percent) of every dollar spent with a national company circulates in the community.

At the same time, developing economic incentives for keeping Watauga's farms in production helps to preserve working farmland and reduce the pressure of selling for development. Keeping farmland productive helps to preserve and protect the natural environment of streams, wetlands, forests and soils.

Perhaps most importantly, providing greater consumer access to fresh and nutritious local foods translates into healthier lifestyles for individuals, reduced long-term health care costs for the community, and an overall sense of greater food security providing all residents access to healthy diets. Diet-related health issues are nearly epidemic in North Carolina, with two-thirds of adults in the state considered obese or overweight, and childhood obesity ranking 5th in the nation. The state ranks 17th in the nation for adult diabetes. Annual health care costs of \$40 billion in North Carolina are largely attributed to preventable diseases associated in part with poor diet and lack of exercise. Studies across North Carolina consistently show a correlation between income and diet-related illnesses, with lower income families and individuals typically having access to cheaper, less healthy processed foods and less access to fresh produce.

Agriculture is still the strongest sector of North Carolina's economy, with an estimated \$70 billion in annual income, representing 20.3% of the state total, as reported by the North Carolina Department of Agriculture and Consumer Services (NCADFPTF webpage, 2010). The majority of this income is generated by commercial production, with over half of the revenues attributed to poultry and hog production. All across the state, new initiatives are supporting the development of local and regional food systems – the growing, harvesting, processing, packaging, distributing, marketing, consuming, disposing, and recycling of our foods. More and more, consumers want to connect with the farms and the farmers who grow their food. According to the *Farm to Fork* report recently published by the Center for Environmental Farming Systems at NC State, North Carolina is well-positioned to lead the nation in developing sustainable regional food systems that are economically viable, environmentally sound, and socially just.

METHODOLOGY

The project involved a community-based planning process, begun in September of 2009 and completed in June 2010, with the following steps:

- Collection of mapping and baseline data for land use, agricultural production, and natural resource stewardship in the county;
- Reviewed current land use plans, ordinances, and regulations to identify whether or not they support the county's agricultural sector.
- Conducted a series of interviews with county officials, farmers, and those involved with the local food economy.
- Prepared Local Agricultural Infrastructure mapping and database to illustrate the current local food system and identify infrastructure needs and marketing opportunities to support the viability of Watauga's agricultural economy.
- Held two Community Visioning Workshops, one in the Fall of 2009 and one in the Spring of 2010, in which Watauga residents presented Challenges and Opportunities facing Watauga's farms and agricultural economy.
- Conducted a series of interviews with farmers and collected input on Farmer Surveys.
- Conducted agricultural assessments for each of the 15 townships.
- Developed an Agricultural Development and Farmland Preservation Plan based on community input and assessment of agricultural data, identifying key issues, Challenges and Opportunities, and presenting Recommendations, Action Steps, and an Implementation Schedule.
- Presented final plan to the County Commissioners for adoption as official county policy.

COMMUNITY VISIONING PROCESS



Participants in small workgroups during Community Visioning Workshop #1

This Plan is based in part on public input received at two Community Visioning Workshops held in Boone, one on October 29, 2009, and one on April 22, 2010. Participants in both workshops learned about the planning process and the current state of agriculture in Watauga County, then shared their input to identify Challenges facing Watauga's farms and agricultural economy, and Opportunities for addressing and overcoming those Challenges.

Community Visioning Workshop #1

On October 29, 2009, the 1st Community Visioning Workshop was held for the Watauga County Agricultural Development and Farmland Preservation Plan. The evening meeting was held at the Watauga County Courthouse in Boone.

More than 40 participants representing various agricultural sectors were present, including cattlemen and women, Christmas tree growers, vegetable and fruit growers, produce distributors, and farmer's market managers. Participants registered and were asked to place a pin on the county map indicating where they live. Individuals networked before and after the meeting, learned about the progress of the Plan, heard from several speakers on various topics related to Watauga County agriculture, and worked in small groups to discuss and offer input on Challenges and Opportunities facing agriculture in Watauga.

Speakers included:

Brian Chatham of Watauga County Soil and Water Conservation, who opened the meeting with an overview of the purpose of the plan and the status of the planning process, and shared statistics highlighting the current state of agriculture in Watauga.

David Harper with Unique Places provided an overview of the purpose for preparing the plan, and the importance of a community-based process for gathering information and making decisions about the future of farming in the county.

Participants broke into small groups to discuss Challenges and Opportunities. These comments were presented and discussed with the larger group. Participants also filled out Farmer Questionnaires and were asked to share the Questionnaires with farmers they know.

Challenges

Participants in the Community Visioning Workshops and those who filled out farmer surveys identified Challenges facing Watauga's farms and agricultural economy. These are summarized below in 4 main categories:

LAND

- land prices are prohibitively expensive for some beginning farmers
- taxes are high - present use value tax does not apply to many smaller farms
- mountain farms are generally smaller than the NC Piedmont and Coastal Plain
- losing precious farmland to development
- land use planning may not recognize the reality that many farmers' land is their only wealth
- farmers are very concerned that new ordinances and regulations will severely reduce the value of their land and their family's equity.

ECONOMICS/MARKETS

- profits are relatively low
- inability for some to make a living
- markets are limited, shifting, not always profitable
- identifying agricultural demand (local, organic)
- no price control or bargaining ability on farm products
- health insurance is expensive
- wholesale prices don't match the cost of production

DEMOGRAPHICS and SOCIAL FACTORS

- aging farm population, needs assistance with farm transition
- young farmers need assistance with farm transition
- farm labor can be hard to find
- young people are generally less interested in going into farming than previous generations
- lack of knowing who is farming and what they produce
- public attitudes are not always supportive of farming

INFRASTRUCTURE

- Storage, processing, and distribution options are limited
- Need ordinances allowing promotional signage for farms

Opportunities

Participants in the Community Visioning Workshops and those who filled out farmer surveys identified Opportunities facing Watauga's farms and agricultural economy. These are summarized below in 4 main categories:

LAND

- tax breaks/incentives
- agricultural easements
- facilitate land leases
- expand research funding for dealing with pests
- expand crop supports/crop insurance

- seasonal variability
- policies that help preserve farm equity and land values

ECONOMICS/MARKETS

- transition from tobacco to other crops
- opportunities to help farmers diversify into other crops and farm products in addition to beef cattle and Christmas trees
- need to make farming economically viable for young farmers
- matching growers and buyers
- farm-to-school programs
- farmer cooperatives with counties
- Watauga Farm Fresh branding and county food map
- creative financing opportunities, community investment (slow money)
- ASU marketing assistance

DEMOGRAPHICS

- teach agricultural skills to young people
- networks connecting young and older farmers (mentoring)

INFRASTRUCTURE

- commercial kitchen (smaller, more central than the closed facility in Ashe County)
- choose-and-cut/pick-your-own operations
- grass-fed beef
- Community Supported Agriculture (CSA)
- how to expand farmers' markets
- New River Organic Growers
- non-organic co-ops
- agritourism
- cabbage/sauerkraut
- specialty crops (herbal medicinals, cheeses, jams/jellies, mushrooms, wine grapes)

Brian Chatham closed the meeting by discussing next steps for finalizing the plan in June.

Community Visioning Workshop #2

On April 22, 2010, the 2nd Community Visioning Workshop was held for the Watauga County Agricultural Development and Farmland Preservation Plan. The evening meeting was held at the High Country Home Builders' Association in Boone.

15 participants representing various agricultural sectors were present, including cattlemen and women, Christmas tree growers, vegetable and fruit growers, produce distributors, and farmer's market managers. Participants were asked to place a pin on the county map indicating where they live. Individuals networked before and after the meeting, learned about the progress of the Plan, heard from several speakers on various topics related to Watauga County agriculture, working in small groups to discuss and offer input on Local Food System mapping.

Speakers included:

Brian Chatham of Watauga County Soil and Water Conservation, who opened the meeting with an overview of the purpose of the plan and the status of the planning process.

Blake Brown representing NCSU discussed NC cost-share programs including value-added grants for farmers.

Joe Martin, President of the Watauga County Farmers's Market in Boone, with an overview of the current status of the Market and its growth plans.

Ann Rose, Marketing Director for New River Organic Growers (NROG), with an overview of the status of this non-profit marketing organization and its growth plans.

David Harper with Unique Places provided an overview of the Watauga Food Economy Assessment being prepared by the Appalachian Sustainable Agriculture Project (ASAP) and presented a series of maps highlighting the local food system and agricultural land use patterns in the county.

Participants broke into small groups to discuss the Local Food System maps in detail and offer their input and recommendations. These comments were presented and discussed with the larger group. Participants also filled out Farmer Questionnaires and were asked to share the Questionnaire with farmers they know.

Public comments about the Local Food System mapping and database included:
Add livestock markets in Wilkes Co. and Abingdon VA; add detailed maps for each township; include forested acres and open/agricultural acres; add medicinal herbs, vineyards, Bed and Breakfasts, horticulture; include a map of Christmas tree farms (wholesale and choose-and-cut); include a map of cattle and other livestock farms; add agritourism sites; include rural sites with local food (general stores, NROG drop-off points); include cabbage and potato farms; add beekeepers and cane producers.

Brian Chatham closed the meeting by discussing next steps for finalizing the plan in June.

AGRICULTURE AND FOOD SYSTEM MAPPING

A series of six county-wide maps are included in this report, and are described below:

Local Agricultural Infrastructure. This map highlights 67 food producing farms and local food infrastructure. Each number corresponds to a location on the map and a farm or other feature on the list. The list includes: 25 farms and orchards (including 2 agritourism operations); 2 livestock auctions; 2 slaughterhouses; 1 butcher; 4 farm supply stores; 5 food distributors; 1 farmers market; 6 local food grocers; 10 local food restaurants; 1 local foods caterer; 7 local processed foods businesses; and 3 local agricultural organizations.

The map shows the distance of farms to grocery stores and markets. Pink indicates the closest (1 mile) and blue indicates the farthest distances (10 miles). Tracts of farmland are also shown in shades of green, with the largest (up to 350 acres) in dark green, and the smallest (1 – 10 acres) in light green, based on USDA/FSA calculations (www.onencnaturally.org).

The Local Agricultural Infrastructure map can be considered an initial map of Watauga's local food system as of 2010. It should be considered a living map for the community, suitable for annual updates to reflect changes and expansion of the county's food producing farms and businesses, food processing facilities, food distributors, and various markets.

Christmas Tree Farms. The map shows wholesale tree farms with a green square, and choose-and-cut farms with a green triangle. Source: the Watauga Christmas Tree Farm Association.

Soil Map – Prime Soils. This map depicts soils from the USDA-NRCS soil study of 2002. Soils are classified as Prime, Prime if Protected from Flooding During the Growing Season, and Soils of Statewide and Local Importance. Protection of productive farmland, prime and statewide important soils is an important criteria the NC Agricultural Development and Farmland Preservation Trust Fund and the USDA's Federal Farm and Ranch Land Protection Program. Farms with at least 50 percent Prime or Statewide Important soils rank well for these funds.

Township Farm Summary. This map shows the 15 townships and acreage of working farmland within each, with Cove Creek and Meat Camp supporting the highest concentrations. Out of over 45,000 total acres of farmland in the County, 7,580 acres are tracts of 10 acres or less. The median acreage of farmland under single ownership is 8.75 acres. Farmland acreage calculations are based on statewide USDA/FSA figures from www.onencnaturally.org.

Farm Segmentation. This map shows acreage of farmland within each parcel, and tax parcels between 0-5 acres (considered "developed"). Red represents parcels less than 10 acres that are more than likely threatened as part of existing subdivisions awaiting development.

Potential Ag District Growth. This map shows existing Voluntary Agricultural District (Voluntary Farmland Preservation Program - VFPP) farm units (fields) in dark green, and in light green shows farm units that are adjacent to existing farms in the VFPP. Adding farms to areas already preserved may help to expand the VFPP and create nodes of preservation. Prime Soils for agriculture are shown in dark brown and Statewide Important Soils are in light orange – both are key indicators of farmland which should be protected for its agricultural productivity. The above indicators are key factors that are prerequisites for farmland preservation funding.

WATAUGA COUNTY PROFILE



Rolling pastureland near Vilas

Population

Watauga County's population is estimated at 45,479 full time residents, which includes approximately 12,000 of the 17,000 students at Appalachian State University who are considered full-time residents. This population swells by an additional 10,000 people or more in the height of summer and during ski season. With over 60 percent of its population spread out over rural areas, the county has a relatively low population density of 142 people per square mile. The racial makeup of the county population is 93.9 percent white, 2.1 percent black, 2.1 percent Hispanic, 0.8 percent Asian, 0.3 percent Native American, and 0.8 percent two or more races.¹² The median age of Watauga County residents is estimated at 30, and is likely influenced by the strong presence of ASU.

Municipalities

Watauga County's agricultural lands are spread out among 15 municipalities, ranging from steep mountainside cattle pastures to potato fields in rich bottomlands, from rolling apple orchards to small, diverse, organic farms. The Townships are: Beaver Dam; Cove Creek; Blue Ridge; Elk; New River; Shawneehaw; Watauga; Brushy Fork; Laurel Creek; Meat Camp; Broad Mountain; North Fork; Stony Fork; Blowing Rock, and the Town of Boone.

Employment

Appalachian State University is the largest employer in Watauga County, with more than 2,800 employees. Education, health care and social services together provide approximately 28 percent of the jobs in the county. Tourist related jobs in arts, recreation, and food service account for approximately 15 percent of the county's labor force. Government jobs are also a steady employer, accounting for at least 23 percent of the jobs. Retail businesses account for roughly 14 percent of the jobs. Unemployment as of 2009 was estimated at 7 percent in Watauga, below the state average. The percentage of residents living below the poverty level was relatively high at nearly 19 percent, compared to 12.3 percent for the rest of Western North Carolina. Per capita incomes in the county exceeded \$30,500 in 2007.

¹² State and County Quick Facts: Watauga County, North Carolina. U.S. Census Bureau, 2008.

Climate

As part of the High Country, Watauga's elevations generate a climate that has longer winters with more snow and ice than other parts of the Blue Ridge, and a somewhat shorter and cooler growing season than other parts of WNC. Precipitation amounts are relatively high, with up to 55 inches of rainfall in an average year and nearly 40 inches of snow. Watauga falls within USDA Plant Hardiness Zones 6a and 6b, with average minimum winter temperatures reaching 0 to -5 degrees Fahrenheit in much of the county, and -5 to -10 degrees Fahrenheit in the southwestern part of the county. Temperatures can reach the high 80's in summer.

Infrastructure

As a largely rural mountain community, most of Watauga's developed infrastructure is concentrated in and around the county seat of Boone, and along major highways such as 421, 321, 221, and 105. No major municipal services (water, sewer) are available outside of the population centers. Most homes in rural areas are on private wells and septic systems. Phone, electric and satellite TV are widespread in the county, and high speed internet service is available in and around Boone.

Natural Resources

Soils Watauga County features areas of Prime Agricultural Soils and Soils of Statewide Importance (Appendix I – Soil Map-Prime Soils) along streams and rivers, and relatively gentle slopes. These areas tend to be used for agriculture including row crops, while steeper, thinner, and less productive soils tend to support Christmas trees, pasture, and orchards.

Water Watauga County is situated in a headwaters area for two major rivers that are part of the overall Mississippi River Basin – the New River and the Watauga River. The streams, wetlands, springs, ponds, and groundwater aquifers are all part of the watersheds for these rivers, and are worthy of careful stewardship and use as part of Watauga's agricultural and natural landscape. As part of the 500 million year old Appalachian Mountain chain, these drainages are considered to be among the oldest rivers in the world.

Much of the northeast section of the county is the birthplace for the New River, which originates in the county as the South Fork and the North Fork, flows north into Ashe County where the forks merge, then through far southwestern Virginia and West Virginia into the New River Gorge National River before merging with the Kanawah River, eventually the Ohio River, and the Mississippi River before reaching the Gulf of Mexico. The south and western portions of the county form the headwaters of the Watauga River at the confluence of the Shanty Spring Branch and the Green Ridge Branch. The river flows north and west into Tennessee, and is impounded to form the Tennessee Valley Authority's 6,400 acre Watauga Lake. The river's waters continue flowing north and west to reach the South Holston River, the Tennessee River, the Mississippi, and eventually the Gulf of Mexico.

Land Use

Land use is described in greater detail in the Township Agricultural Assessments. Watauga County includes a land area of approximately 313 square miles, or 200,600 acres. The pattern of

land use in Watauga is largely shaped by its mountain topography and underlying crystalline geology, with the steepest most remote areas either in private ownership as working forest, or serving as either part of Pisgah National Forest, the Blue Ridge Parkway lands, Grandfather Mountain State Park, or Elk Knob State Park. Farmland tends to be concentrated along the bottomlands and rolling hills above the major river valleys and their tributaries. Larger towns such as Boone and Blowing Rock are situated in relatively high elevation plateaus. Major roads tend to follow stream valleys in the county, while the Blue Ridge Parkway meanders along the mountain slopes in the southeastern part of Watauga.

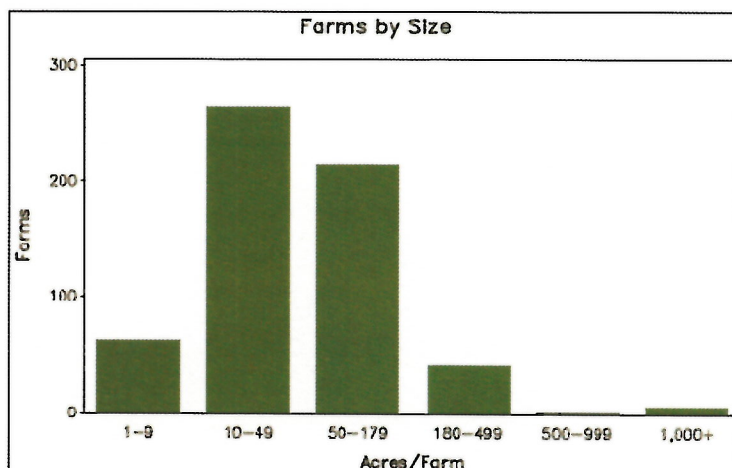


Bottomland subdivision

Protected Lands

Watauga County features a growing network of protected lands, ranging from the federally protected working forests of the Pisgah National Forest, the federal, historic scenic byway of the Blue Ridge Parkway, Elk Knob State Park, the new Grandfather Mountain State Park, and other county park land. In addition, a growing network of private protected lands includes conservation easements held by the High Country Conservancy and other land trusts. The recent protection of 1,800 acres of Elk Knob, the second highest peak in the county is an example of public-private cooperation to protect an important landscape. As development plans threatened the tract in the late 1990's, The Nature Conservancy's North Carolina chapter worked with the State of North Carolina to negotiate a purchase of the land for eventual inclusion in the State Park system. Today, a partnership with Appalachian State University Center for Appalachian Studies records oral histories and teaches visitors about historic, sustainable farming practices typical of the Elk Knob area in previous generations.

WATAUGA COUNTY AGRICULTURE



From US Census of Agriculture, 2007, Watauga County Profile

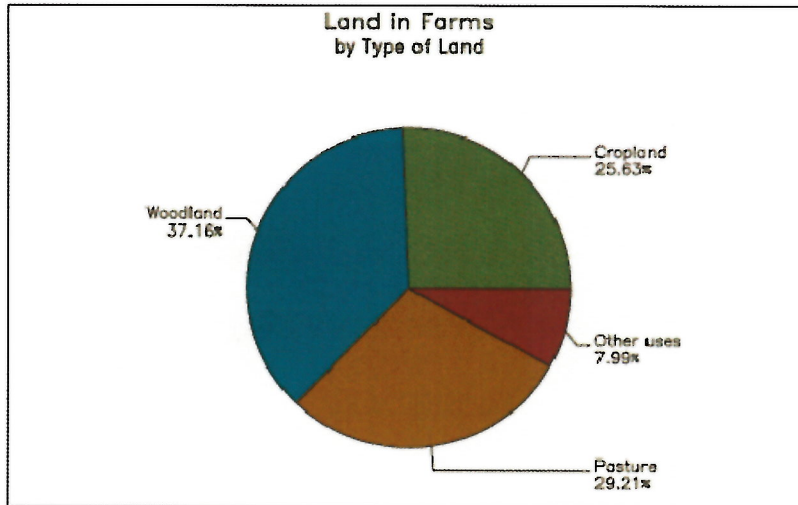
Watauga's farm sizes are typical of many WNC mountain communities. The US Census of Agriculture of 2007 documents that the average farm size in Watauga County is 78 acres, a 10 percent increase over 2002's average. Out of an estimated 587 farms, nearly half are within the 10 to 49 acre size class, while over 200 farms fall within the 50 to 179 acre category. Over 50 farms are listed as 1 to 9 acres in size, and approximately 30 are in the 180 acre to 499 acre category. A few farms are in the 500 to 999 acre size class, or over 1,000 acres.

The United States Department of Agriculture, as part of the One NC Naturally statewide agricultural assessment, documented 20,240 acres of farmland in Watauga (pasture, cropland, hayfields, orchards, Christmas trees and other horticulture) based on assessments of aerial photographs. Of these, 7,580 acres (37% of the total) are on farm parcels of 10 acres or less. This figure of 20,240 is significantly less than the USDA 2007 Farm Census figure of 45,782 acres, based on actual form surveys. The different acreage calculations can be attributed to the 2007 Farm Census data including both open farmland and woodland on farms, whereas the USDA/FSA data from www.onencnaturally.org specifically identifies open farmland.

An increase in small food producing farms in recent years has been noted in the Summary Food and Farm Assessment (Appendix VI), with a 125 percent increase in crop value for vegetables, melons, potatoes, and sweet potatoes produced in Watauga and a 30 percent increase in farms producing those crops during that same period. Similarly, the number of farms producing fruits, tree nuts, and berries grew by 64 percent during that period. This overall growth of small food producing farms will likely be reflected more fully in the 2012 Census of Agriculture.

Sharp declines in tobacco production between 2002 and 2007 are evident in the Census data, revealing a 94 percent drop in the number of farms growing tobacco in the county, from 185 to 11.

Declines in cattle production are evident in the same period, with a 23 percent drop in the number of Watauga County cattle farms, from 341 to 264. As of 2007, there were an estimated 7,500 head of cattle in the county.



From US Census of Agriculture, 2007, Watauga County Profile

According to the USDA Farm Census of 2007, Watauga County's 200,600 acres of land includes 45,782 acres of farmland (23% of the total land area), which reflects a major decline of 12 percent over the five year period between 2002 and 2007. This land is primarily pasture land (29 percent of farmland) with smaller amounts of cropland, which includes hayland (26 percent of farmland). Woodland is the most prevalent category (37 percent), indicating that many mountain farms include wooded slopes. Other uses (including development) account for an estimated 8 percent of Watauga's land in farms.

Agricultural History



Mast House, courtesy of Watauga County Historical Society

Watauga's history is typical of a mountain farming community, with strong economic ties to forestry. Prior to settlement in the 18th and 19th centuries, the Cherokee managed both the forests and farm plots for food production, focusing on "the three sisters" of corn, beans and squash, with wild-collected plants and game.

Through much of the late 19th and early 20th centuries, small mountain farms made do with shallow, poor soils, and limited productive bottomlands, generally producing enough food for home use and local sale, supplemented by hunting and gathering. Potatoes, hogs, cattle, and a large garden were common on many farms, as were sheep, which most farm families kept for wool and meat. Burley tobacco was grown through much of the 20th century on a small scale, and was locally important but suitable acreage for growing tobacco was limited compared to production in Kentucky and elsewhere.

Beans and cabbage were good income generators in the region during World War II, selling to national buyers to meet demand, though prices dropped drastically after the war. Cabbage, and particularly sauerkraut production, was a strong part of Watauga's farm economy in the mid to late 1900's. The current Watauga County Center in Boone was a former sauerkraut factory, with the nearby creek named Kraut Creek due to the discharge from processing so much cabbage. By the late 1900's, as national brands and preservatives and changing tastes shifted the demand for sauerkraut, Watauga's production diminished.

The presence of empty grain silos and chicken houses dotting the county indicates that dairy and poultry both had a presence in the agricultural economy in the early to mid-20th century. Dairy was much more localized at the time and farms could profit by selling milk to regional dairies. Cheese production was common from the early 1900's through the World War II era. The presence of chicken processing plants in nearby Wilkesboro meant that many farms in Watauga and elsewhere in the High Country increased production of chickens to meet demand.

As has been documented in the Buncombe County plan and elsewhere, the 1960's and 1970's were a period when hard lessons were learned by WNC farmers. The national push toward large-scale industrial agriculture did not fit the small farms challenges of geography and distance found in many mountain communities. The markets were far away and the larger flatter farms could compete easier. While areas such as Henderson County have become dominant apple growing areas, the small number of orchards remaining in Watauga County is a reminder of a time when apples were much more prevalent in the area.

Beef cattle remain a steady presence in the agricultural economy. Most of these are cow-calf operations shipping to regional auctions at Kingsport, TN (78 miles from Boone), Abingdon, VA (50 miles from Boone), Wilkesboro, NC and Turnersburg, NC. The Stockyard Bucking company in the Deep Gap area hosts video auctions for cattle companies. Local processing was carried out at the Ashe County Abattoir in Jefferson until the late 1990's. Today, farmers selling locally processed beef must ship cattle to USDA-approved facilities such as Thomas Brothers Meat Processing in North Wilkesboro (35 miles from Boone) and Mays Meat Processing in Taylorsville (50 miles from Boone). These facilities are indicated on the Local Agricultural Infrastructure map.

Demand for Christmas trees grew across the country in the 1950's and 60's, and farmers in Watauga saw an opportunity to generate extra income by planting Fraser firs.

The 2004 federal Tobacco Buyout greatly affected Watauga's farming economy, with a 94 percent decline in the number of farms producing tobacco in just 5 years between 2002 and 2007. The Summary Food and Farm Assessment (Appendix VI) includes more detail about this transition.

Grain production in the High Country was at one time a larger part of the agricultural economy, with a number of local grist mills in operation, including the historic 1802 Trade Grist Mill on Highway 421 just across the Tennessee line. This restored mill still grinds wheat and rye flours, corn meals, and flax, grains that would have been part of the local farm economy for much of the last 200 years.

TOWNSHIP AGRICULTURAL ASSESSMENTS

Townships are shown on the Township Farm Summary map which includes a list of agricultural land acres within each, ranging from least to most.

To document the current state of agriculture in Watauga, volunteers and Project Team members fanned out across the county to capture the essence of farming in each township. In some cases, farmers were interviewed and their answers are included in the Farmer Surveys (Appendix IV). Farmer interviews and surveys were conducted at Community Visioning Meetings and farm visits during which interviewers talked with farmers who were available.

The individual Township Maps included in the Appendices allowed the surveyors to conduct “windshield surveys”, taking notes and photographs of different farms and agricultural crops along specific roads, valleys, and ridges, assessing trends and patterns. For example, some Townships are predominantly large farms with cattle pastures and hayfields, some areas have high concentrations of abandoned dairy farm structures (dairy silos, chicken houses), while other areas included more diverse mixes of smaller fruit and vegetable farms.

The countywide Township Farm Summary map offers a sense of how each township varies in its concentration of active farmland. The greatest concentrations of farmland can be found in the north-central part of Watauga County, in Cove Creek Township and Meat Camp Township. The lowest concentrations of farmland are in areas dominated by forested mountains, such as Elk and Blowing Rock Townships in the southeast section of the county.

Taken together these individual Township Agricultural Assessments offer an unprecedented, detailed snapshot of agriculture and local food production and distribution in the county.

Beaver Dam – Beaver Dam Township is located in the far northwest corner of Watauga County, bordering Johnston County, Tennessee. There are no major roads in this township, and a significant amount of the westernmost portion borders the steep mountain forests of the Pisgah National Forest. The township has substantial mountainous terrain, including Buckeye Knob (4,379 ft. elevation) toward the north end. The largest concentration of agricultural lands in Beaver Dam township can be found in the vicinity of the farming community of Bethel, along Bethel Road and Rush Branch Road, extending east to the village of Sweetwater. This area has the largest blocks of farmland enrolled in the Voluntary Farmland Preservation District (VFPD). The northern end of the township also has significant blocks of farmland in the bottomlands and adjacent slopes along Mountindale and Beaver Dam Roads.

Cove Creek – Cove Creek Township also lies in the northwest corner of Watauga County, east of Beaver Dam Township. US HWY 421 runs through the center of the township. Cove Creek tops the list for the most acreage of farmland (2,799 acres) in Watauga County. The greatest concentration of agricultural land can be found along Old US HWY 421, which includes the communities of Zionville at the north end, villages of Mabel, Mast, Amantha, Sherwood, and Sugar Grove at the south end. The township is bordered to the east by the steep wooded slopes of Rich Mountain (5,372 ft. elevation). Farms enrolled in the Voluntary Farmland Preservation District are scattered throughout the township, with no concentrated areas.



Spring House Farm (left) and North Fork Farm, Cove Creek Township

Blue Ridge – Blue Ridge Township is situated in the far southeast corner of Watauga County, bordering Caldwell County, southeast of Boone and east of Blowing Rock. The Blue Ridge Parkway is the major road, passing through the northern section of the township. The township has a relatively small amount of working farmland (891 acres) compared with other parts of Watauga, concentrated along the Parkway community of Bamboo, with lesser amounts near Jake Mountain, and Thunder Hill. The southern and eastern portion of Blue Ridge Township is largely dominated by forested mountain slopes around Mast Knob (3,455 ft. elevation).

Elk – Elk Township is situated in the far southeast corner of Watauga County, bordering Wilkes County, east of Blowing Rock and southeast of Boone. The township is almost entirely forested and mountainous, with land along Mast Knob (3,455 ft. elevation) and adjacent Powderhorn Mountain and Osborn Mountain, part of the Pisgah National Forest. Elk has the smallest acreage (77 acres) of farmland of any township in Watauga, and most of these small farmfields can be found in the lower Elk Creek valley at the north end of the township.

Boone – the Town of Boone is centrally located in Watauga County at the intersection of US HWY 421, US HWY 221, US HWY 321, NC-194, and NC-105. As the county seat, with a relatively small area, Boone has very little farmland remaining, with only 6 acres in the NC Naturally agriculture mapping. Its land uses are largely devoted to residential, commercial, and academic purposes, and the Boone 2030 land use plan does not focus on agriculture as a future use within the town limits. Boone has existing community gardens, the Leola Street Garden and gardens at ASU. Urban agriculture holds great promise for expanding food production in the population center of Boone, with community gardens, micro-farms, urban orchards, greenhouses, edible landscaping, and green roof gardens all possible throughout the community.

New River – New River Township wraps around Boone to the east along US HWY 421, to the north along NC-194, and to the south, south of NC-105. New River includes developed “suburbs” of Boone and undeveloped peaks such as Howard Knob County Park (4,420 ft. elevation), along with 1,661 acres of farmland. The greatest concentration of farmland in New River Township can be found along the bottomlands and adjacent slopes of the South Fork of the New River east of NC-194 along Brookshire Road. The largest block of Voluntary Farmland Preservation District land can be found east of NC 194 along the northern township boundary. Additional blocks of farmland can be found in the eastern portion of the township near the Blue Ridge Parkway. These areas are experiencing development pressure as Boone grows to the east.



Pasture and woodland, New River Township

Shawneehaw – Shawneehaw Township is located along the western boundary of Watauga and Avery County. It is bordered by Banner Elk to the west, Beech Mountain to the north, Seven Devils to the south, and Valle Crucis to the east. NC-194 is the main road in Shawneehaw, crossing the township from west to east. The township falls entirely within the boundaries of the Pisgah National Forest. The greatest concentration of farmland and VFPD farms in the township is north of NC-194 along Shawnee, Worley, Laurel Creek, and Andy Hicks Roads.

Watauga – Watauga Township is the largest township in Watauga County, encompassing a broad swath of the western portion of the county from Vilas in the north to the southwest corner of the county close to Grandfather Mountain in the south. Valle Crucis is the main community, and NC-194 and NC-105 are the main roads in the township. The majority of the township, in particular the southwestern portion south of Valle Crucis and west of Blowing Rock falls within the boundaries of Pisgah National Forest and the new Grandfather Mountain State Park. The greatest concentration of farmland in Watauga Township is the bottomland along the Watauga River in the vicinity of Valle Crucis along NC-194 and Broadstone Road. Voluntary Farmland Preservation District farms are few and scattered in the township, with one large block along the far northwest boundary.

Brushy Fork – Brushy Fork Township is located west of Boone and includes developed and developing areas along NC-105 and US HWY 421. Brushy Fork has relatively little farmland (1,138 acres) and much of it is scattered, with the main large contiguous blocks situated near Vilas along US HWY 421 at the east end of the township. The township has few areas enrolled in the VFPD program, but does include a substantial wooded tract on the south side of NC-105.

Laurel Creek – Laurel Creek Township is situated east of Beech Mountain and west of Vilas along both sides of US HWY 321. It includes 1,568 acres of farmland scattered primarily along the Watauga River bottomlands, with large tracts of contiguous farmland enrolled in the Voluntary Farmland Preservation District at the east end of the township. Much of the land south and west of the Watauga River falls within the boundaries of Pisgah National Forest, though still allows for private holdings. Laurel Creek township includes a mix of large fenced pastures with cattle and horses, large home gardens, chicken flocks, hayfields, few crop fields, and Christmas tree farms (some choose-and-cut)

Meat Camp – Meat Camp Township is situated in the north central part of Watauga County, with NC-194 running through the township from north to south. Meat Camp has a dramatic landscape, with Elk Knob State Park (5,556 ft. elevation), the second highest point in the county, situated along its northern boundary. Meat Camp has the second largest amount of farmland, with 2,770 acres, and a substantial number of farms enrolled in the Voluntary Farmland Preservation District. Much of this agricultural activity can be found in the New River bottomlands and rolling slopes along NC-194. An additional concentration of farmland and VFPD enrolled farms is located in the Tater Hill Road area along the southwest border of the township near Vilas. Big Hill Road includes large areas of pasture, some with horses, and also smaller Christmas tree farms. Large home gardens can also be seen along this road.

Meat Camp Road includes small areas that are plowed for row crops, some pastureland with horses, and small plots of Christmas trees. Apple orchard and feed corn plots can be found along Ridge Road. On Pine Run Road near Ridge Road there are larger areas of pastureland with some cattle and horses, and a choose-and-cut Christmas tree farm. Castle Ford Road also includes large areas of pastureland with some cattle. In bottomland along the South Fork of the New River, on Appaloosa Trail, row crops are planted, and some horses are on pasture. NC-194 has much larger areas of pasture with many head of cattle and some horses. A couple of large farms are for sale in this area. At least one farm has flat land planted in row crops. Some Christmas tree farms are also located here, including choose-and-cut. An empty greenhouse along 194 offers a sense of past and future potential for extending the growing season.



Coffee's Orchard (left) and Christmas Tree Farm (right), Meat Camp Township

Bald Mountain – Bald Mountain Township follows Watauga County's northeast border adjacent to Ashe County in the vicinity of the village of Todd. NC-194 passes through the township. Bald Mountain's relatively small amount of farmland (629 acres) and Voluntary Farmland Preservation District land is mostly located along the South Fork of the New River east of Todd.

North Fork – North Fork Township is located in the far northeast corner of Watauga along the Ashe County border. NC-88 passes through the far northwest corner of North Fork. This is a relatively small township with a fairly large concentration of farmland (1,537 acres) and farms enrolled in the Voluntary Farmland Preservation District. The largest block of contiguous farmland under single ownership (350+ acres) in the county is located here along Long Hope

Mountain between Elk Knob and Old Field Bald (4,958 ft. elevation). Numerous Christmas tree farms, cattle pastures, hayfields, and some horse and sheep can be found here.



McCoy Farm, North Fork Township

Stony Fork – Stony Fork Township is located in the far east corner of Watauga County, bordering Wilkes County and Ashe County. US HWY 421 and the Blue Ridge Parkway run east to west through the township, and Deep Gap is the main community. Stony Fork has the third highest concentration of farmland in the county (2,640 acres), and a large amount of farmland enrolled in the VFPD. Many of these farms are situated north of US HWY 421 near Deep Gap.

Blowing Rock – Blowing Rock Township, which includes the resort village of Blowing Rock, has the 2nd smallest amount of farmland of any township in the county (244 acres). The township includes forested mountain slopes along the Blue Ridge Parkway surrounding the village, and its farmland is mainly found along the US HWY 321/221 corridor between Boone and Blowing Rock. There are no VFPD farms currently enrolled in the township. Most of the township south and west of the village of Blowing Rock falls within the boundaries of Pisgah National Forest and the forested slopes of the Blue Ridge Parkway.

KEY ISSUES

Through public meetings and interviews with numerous farmers, agricultural professionals, and local residents, the following Key Issues have been identified as central to Watauga's farming future.

KEY ISSUE: MARKET OPPORTUNITIES

Watauga farms have increasing access to new and expanding local and regional markets and market sectors. Direct-to-consumer sales are a primary income source for an estimated 3,712 farmers across North Carolina who sell an estimated \$29 million annually in farm products through 200 farmers markets and 100 Community Supported Agriculture (CSA's). In Watauga, direct sales through the Watauga County and Ashe County Farmers Markets, and a growing number of CSA's and on-farm stands help farmers to realize some of this income. Sales to retailers such as groceries (Bare Essentials, Ingles, Earthfare) and local food restaurants, to distributors such as New River Organic Growers and Eastern Carolina Organics are also important options that expand each year.

The size of the local foods market for Watauga specifically has not been accurately estimated, however, as indicated in the Summary Food and Farm Assessment (Appendix VII), growth is increasing. Watauga-based distributors Hollar and Greene and Critcher Brothers both buy cabbage from local farms, with the latter marketing a line of local cabbage. Grocery stores like Harris Teeter, Food Lion, and Ingles have an interest in carrying local produce but typically work with larger broker/distributors. An estimate of the land area and number of farms needed to meet local markets is included later in this section. Institutions such as Appalachian State University, Watauga County Schools, and the Watauga Medical Center represent an important and virtually untapped market for local farmers. With more than 45,000 Watauga residents and a strong culture around local foods, farmers have good potential for reaching a broader market.

Farmers Markets



Boone's Mayor Loretta Clawson at the Market

The Watauga County Farmers Market has been operating Saturday mornings in Boone since 1974, and has added a Wednesday evening market. The High Country Farmer's Market is held Sunday mornings in the Earthfare parking lot. Vendors from 7 counties participate in the Saturday market and are selling out each week. The surrounding communities and Watauga benefit from a wide range of growing conditions, from High Country berry production to corn grown in the foothills.

The abundance of farm products offered at the market includes a wide range of organic and sustainably grown vegetables and fruits, local meats and dairy products, and prepared foods such as breads, jellies and salsas. Vendors proudly proclaim that the market sells everything needed to make a BLT sandwich – the bacon, lettuce, tomato, and bread. A number of vendors sell organic or no-spray specialty vegetables and fruits. Surveys of farmers' market customers indicate that people will pay a premium for local and organic produce. Grass-fed beef is selling well at the market, though slaughterhouses are a good distance out of the County. Meat and milk from goats and sheep are selling at market.

The market currently has 104 vendors (120 in 2009) and 78 spaces at its current location in a parking lot on Horn in the West Drive. The market is limiting new members to ensure a good mix of offerings. Younger farmers are encouraged as most vendors are middle aged or older. According to market president Joe Martin, "We need younger farmers, but the barriers to entry are incredible. Land acquisition costs, the costs of tractors and equipment are all high."

The market is seeking a new site, as much as 4 or 5 acres to handle additional vendors and 300 to 400 cars. Finding level ground around Boone is a challenge. The market runs for 26 Saturdays, from early May through October. What is the limit for the market? That is an open question. How many more vendors and how many more customers could the market handle? Boone is landlocked in some ways by geography, with no large markets nearby. Still, the market can expect to grow as demand for local foods increases, and as residential growth continues in the area as more residents are attracted to Watauga's amenities.

Community Supported Agriculture (CSA)

In the past 20 years, CSA's have become one of the most popular new models for linking farmers and consumers in a mutually-beneficial economic partnership, with over 2,500 CSA's in operation across the country.

At the beginning of each growing season, individuals and families purchase a membership that represents a "share" of the farm products to be produced that season. The average CSA may have between 50 and 150 members, with a few mega-CSA's in urban areas reaching over 1,000 members. A typical share may cost \$500 for a small family, and generally means that the member receives a bag or box of farm products (vegetables, fruits, sometimes eggs, dairy, canned goods, flowers, or even meats), each week from May through to October. The farmer benefits by having a guaranteed pool of customers who pay up-front and help cover the start-up costs for the season, and the members benefit by knowing they will have a consistent supply of fresh, local foods while helping to build community and support a local farm. In Watauga County, at least three CSA's are in operation and are included in the Local Farms and Food Infrastructure map (Appendix I): High Country CSA – a multi-farm CSA operated through Maverick Farms; Mortetz's Mountain Orchard CSA; and Mountain Works CSA. In addition, Creeksong Farms CSA is located in Ashe County but sells in Watauga

Institutional Sales

Large-Scale Market Potential for Local Produce in Western North Carolina (not including meat and dairy)		
Produce Buyer Type	Current Spending	Desired Spending
Full Service Groceries	\$5,100,000	\$13,500,000
Speciality Food Stores	\$100,000	\$234,000
Full Service Restaurants	\$117,000	\$760,500
Summer Camps	\$27,500	\$51,840
Public Schools	\$19,000	\$139,230
Colleges/Universities	\$18,450	\$169,000
Hospitals	\$25,600	\$289,536
Total Wholesale Spending	\$5,407,550	\$15,144,106
Direct Sales	\$3,100,000	\$6,200,000
Total	\$8,507,550	\$21,344,106

Source: *Growing Locally*, p. 46, Appalachian Sustainable Agriculture Project, 2007.

As illustrated in the table above prepared by ASAP, developing relationships between farmers and institutional food buyers in the community is an essential next step toward growing Watauga's food economy. Public schools, hospitals, and colleges/universities in WNC reported they would spend from 6 to 10 times more than their current spending on local produce if it were more widely available.

Organizations such as ASAP and Watauga Cooperative Extension have the ability to work directly with Watauga County Schools on farm-to-school initiatives, and with the Watauga County Medical Center on farm-to-hospital initiatives. This may mean starting with a small, basic product such as potatoes or apples, and expanding from there. It may also mean developing the necessary processing infrastructure for washing, sorting, packing, storing and transporting local produce. Successful examples of developing these relationships require farmers and distributors to be careful to meet the specific processing, packaging, and delivery needs of the food buyers. Madison Farms in nearby Madison County offers good examples of how these relationships can be built with good planning and investment partnerships between government agencies and local farmers.

With Appalachian State University as the major employer and one of largest food service systems in the county, the challenges and opportunities for matching farmers with the chefs and food buyers are well worth addressing through a feasibility and pilot project focusing on different products.

Retail Sales

The Boone area benefits from a series of grocery stores that carry local foods to varying degrees. Bare Essentials Natural Market is a locally-owned health food store that carries local farm products. Earthfare is a regional 18-store natural foods grocer that emphasizes its commitment to buying from local farms. Ingles, an Asheville-based grocery chain with 200 stores in 6 states, is increasingly marketing local and organic produce. Surveys by ASAP as part of their *Growing Local* report indicated a desire by groceries and specialty food stores in WNC to at least double their spending on local fruits and vegetables based on rising demand and consistent availability of a variety of produce. For example, the report indicated that full-service grocery stores in WNC spent an estimated \$5.1 million on local produce in 2007, and would spend up to \$13.5 million. Specialty food stores estimated \$100,000 spent and up to \$234,000 in desired spending.

Restaurants and Caterers

At least a dozen restaurants and one caterer in Watauga County are listed as purchasing local farm products on a regular basis, though many more may do so on an as-needed basis depending on what foods are in season. Farmers selling directly to restaurants have the advantage of developing personal relationships with the chefs and owners, and also directly participating in the promotion of the High Country as a food travel destination. Distribution cooperatives such as NROG can play an important role in helping farmers to reach restaurants. The ASAP *Growing Local* study documented a desire among restaurants to drastically increase spending on local produce by as much as 6 times the current amount as shown in the table above.

Distribution and infrastructure

Watauga's farms are within 30 miles of the Tri-Cities market of 600,000 residents in Bristol, southwest Virginia and Kingsport and Johnson City in northeast Tennessee. This market may be closer and less-saturated with local foods than larger mountain towns such as the greater Asheville metropolitan area (population 400,000). The Tri-Cities has large farming areas available in close proximity that could gradually increase production of foods for local consumption. Areas such as Winston-Salem, Hickory, and Charlotte may also provide important niches for mountain farms, though there would be expected competition from other mountain counties in NC and VA. What is the best strategy for reaching this market with Watauga County's farm products? One of the best local examples is New River Organic Growers (NROG) <http://newriverorganicgrowers.org/>

New River Organic Growers (NROG)

New River Organic Growers was established in 2000, and started with sales of organic produce and some meats to local restaurants. NROG is one of the more successful examples in WNC of how farmers can work together with Cooperative Extension to get products to market. This business is seasonal with more tourists patronizing High Country restaurants in the warmer months. NROG includes 36 farmers (8 more than last year) from 5 counties in northwest NC. Four of these are large-volume farms, and five are meat producers who are Animal Welfare Approved (humane, free-range). The High Country CSA buys NROG produce under contract. Some produce is sold through Eastern Carolina Organics (ECO) by "back-hauling" otherwise empty trucks coming up or down the mountain. NROG is in discussion with ASU about the potential for marketing produce for its food service, especially to meet winter demand for staple crops using high tunnels and greenhouses.

NROG is willing to market produce from commercial and non-organic growers separately. Specialty crops include red winter wheat for bread flour, shitake mushrooms and apples. They also emphasize staples such as lettuce, tomatoes, and onions. NROG hosts potluck dinners for farmers to socialize, and to recruit new farmers. NROG is seeking to expand with more farmers – the demand exceeds their supply. There are not enough food farmers to feed all local residents, and most beginning farmers are in need of land.

Other collaborative distribution strategies may involve limited partnerships or limited liability corporations, such as ECO, which is a farmer-owned company that operates like a cooperative but is organized as a private company with profit-sharing (www.easterncarolinaorganics.com).

Urban Agriculture



Edible Schoolyard at ASU

The population center of Boone, with approximately 15,000 residents and an additional 17,000 college students (8,000 of which are considered full-time residents), has the Leola Street Community Garden as a place where local residents can rent plots and participate in growing food with others. The ASU campus also has a community garden in place, the Edible Schoolyard, where students can participate in local food production. As interest in local foods continues to grow, additional community gardens and urban micro-farms can be established where people live. Food production should be considered an essential part of the liveable communities strategy outlined in the Boone 2030 Plan.

Agritourism

Agritourism combines the best of regional tourism with regional agriculture. Given the fact that Watauga's economy is dominated by tourism, it is essential that farmers and food businesses in the county find ways to strengthen the relationship between mountain travel and mountain foods. Bed and Breakfast accommodations at farms are one important example of making these connections. Maverick Farms and the Mast Farm Inn in Valle Crucis are examples of these kind of farm stays that allow visitors to experience the farm and its foods. These organizations and others (such as High Country Locavore) also host farm dinners that engage visitors in learning about the abundance of foods that are grown and prepared locally and served on the farm. Watauga's strong choose-and-cut Christmas tree industry is another vibrant example of

agritourism, as families return each year in a holiday tradition of exploring the tree farm and choosing the right tree.

Watauga is well-positioned to develop itself into a destination for both local foods and mountain recreation, as speaker and food writer Tom Philpott spoke of at the first annual High Country Food Summit.

Building relationships between farmers, restaurant owners and chefs is essential, as is the tourism offices such as:

Boone Chamber of Commerce <http://www.boonechamber.com/>

Boone Convention and Visitors Bureau <http://visitboonenc.com/attractions.htm>

Blowing Rock Chamber of Commerce <http://www.blowingrock.com/>

High Country Host <http://www.highcountryhost.com/>

Watauga County Tourism Development Authority <http://www.exploreboonearea.com/>

Farm Supply and Finance

The availability of farm supply stores and farm financing options is generally a good indicator of how strong the farming economy is in a given area. If a farmer can find parts for his or her tractor without having to drive 2 counties away, that's a sign that they still live in an agricultural area. If a farmer can negotiate an equipment loan with a local bank that specializes in farm financing or a farm insurance office, that is another good indicator of a strong rural economy.

Cost-share programs such as WNC Ag Options and NC Value-Added Cost Share are available to local farmers to promote development of farm businesses.

Watauga benefits from several farm supply stores, which are mapped as part of the Local Agricultural Infrastructure map. These include: Southern States in Boone, David Miller Farm Supply near Zionville, Stockyard Bucking Co. in Deep Gap.

Boone is also home to banks such as Carolina Farm Credit and insurance companies such as the North Carolina Farm Bureau Insurance Group. It is important to note that lenders make loans to local farms based on non-farm income and on the equity value of the land, more so than the projected agricultural income for each farm.

Latino Population Growth

Latino immigrants are becoming an increasing presence in Watauga County in association with working on farms and in the food industry, though they currently comprise less than 3 percent of the population. In some cases, immigrants may come from regions of Mexico or Central America where they have grown food and worked in agriculture. As this population continues to grow in WNC, farmers and agricultural professionals can find ways to work with immigrants as a productive part of a strengthened food system for Watauga.

Estimated Acreage to Meet Demand for Local Foods

It is important to explore the market potential for local foods by describing the size of the market based on current information, and an estimate of the acreage of farmland needed to supply that market.

Markets and producers in and around Watauga County are important in this discussion – the county line is not a boundary for commerce. The contiguous NC counties of Avery, Caldwell, Wilkes and Ashe can be included in this assessment. The western North Carolina counties of the Advantage West economic development region had a combined population of 1,061,467 as of the last census. The population of Watauga and its contiguous NC counties is 235,692, or 22 percent of the WNC population. This implies that this area is about 22 percent of the potential market for local produce as identified by the ASAP *Growing Local* study. The Growing Local report indicates that a current market size for local produce of \$8.5 million and a desired market size of \$21.3 million in the region, and an additional \$6.4 million in potential for direct marketed produce. The combined total of \$27.7 million in market potential for local produce in WNC can be estimated to include approximately \$6.15 million in potential demand for the five NC counties around and including Watauga.

By including an estimated average value of \$5,000 per acre for produce crops, the five counties would need an estimated 1,230 acres in production to meet demand. The current market value as estimated would only require approximately 377 acres in production. The 2007 Agricultural Census indicated that the five counties had 79,488 of harvested cropland. Based on these estimates, only about 1.5 percent (1,230 acres) of harvested cropland is needed to supply the local produce market. If lower per-acre values are used, the numbers increase proportionately but are still relatively low. For example, a figure of \$2,000 per acre would require 3,075 acres or 4 percent of the available cropland.

This simple analysis does not take into consideration land available for production in adjacent Tennessee counties and it defines the market for local food narrowly (much less than 400 miles that USDA defines for local food). It does show that, when looking within or beyond the Watauga county lines, land is not a limiting factor in supplying the local food market. Opening up access to more land for local food production requires a combination of decisions. Farmers may decide to shift more of their acreage into production for local markets, or to lease land to farmers who would serve those markets. Access to land in western NC can be addressed by education on growing for local markets, and facilitating appropriate rental arrangements.

KEY ISSUE: AGRICULTURAL EDUCATION

One of the top concerns raised consistently by Watauga residents in Community Visioning Workshops, interviews, and farmer surveys was the need to educate the next generation of farmers about how to grow food, and to encourage them to choose farming as a vocation. Learning to run a successful farm operation of any kind is a lifelong process that can begin at any age. Agricultural education traditionally took place at the side of a father or mother, and in some cases still does, but can also include university programs, farmer incubator programs, and a growing number of training opportunities. 4-H programs and Future Farmers of America are long-time traditions for children of farm families, and are still prevalent in Watauga County.

Academic Programs

Western North Carolina has an especially rich variety of educational opportunities for beginning farmers, with two of the premier Sustainable Agriculture programs at Warren Wilson College in Swannanoa and Appalachian State University's Sustainable Development Program in Boone. ASU offers a hands-on emphasis in Sustainable Agriculture at its Teaching and Research Farm near Valle Crucis. Each year, these programs graduate 15 to 30 students with skills in producing food and excitement about doing it as a livelihood. They face significant challenges and lack of support in finding affordable access to land in the High Country and Asheville area, and many leave the area in search of better opportunities elsewhere. Watauga County residents, businesses and institutions can work to retain these skilled young farmers, and to attract new and beginning farmers of all ages, with some of the programs listed below. In the Piedmont, Central Carolina Community College and NC State's Center for Environmental Farming Systems offer sustainable agriculture education opportunities.

County Programs

Watauga's Soil and Water and Cooperative Extension Offices provide consistent and valuable technical assistance and education to existing and prospective farmers, including certification workshops, field days, helping to organize farmers markets and distribution cooperatives. Richard Boylan, Extension Agent for Watauga and Ashe Counties, was named Cooperative Extension Agent of the Year in 2009 by the Carolina Farm Stewardship Association, in recognition of his assistance to High Country farmers in advancing sustainable agriculture and local foods production in the region. NC Cooperative Extension provides resources in other subject matter areas as well. Meghan Baker, Extension Agent, and Jim Hamilton, County Director offer educational programs and resources for Christmas tree growers and timberland owners. Eddy Labus offers educational programs and resources related to livestock and field crops. This includes a monthly cattlemen's association meeting and educational program. The Cooperative Extension Service of Watauga County offers numerous workshops and provides a link to extensive resources at North Carolina State University and North Carolina A&T University. These resources include programs such as the Center for Environmental Farming Systems and NC MarketReady. In addition NCSU has extension specialists in Christmas tree production located in the mountains and a research farm in nearby Laurel Springs.

Conferences, Workshops, and Training Networks

CRAFT WNC – Collaborative Regional Alliance for Farmer Training is a national, grassroots model to give established, successful farmers a stake in the training of our next generation of growers, and to give farm apprentices a rich educational experience that truly encompasses the

ins and outs of farm operation. In Western North Carolina, CRAFT WNC originated through the Organic Growers School and hosts regular farm tours in the Asheville area. As interest in the High Country grows, new farmers can join CRAFT WNC as members, and explore the feasibility of starting a branch of the program focused on the High Country.

<http://www.organicgrowersschool.org/content/1874>

The Organic Growers' School (OGS), held in Asheville every spring, is one of the largest agricultural gatherings in the Southeast, with 2-days of classes led by farmers and other professionals experienced in all manner of farming operations.

The annual farming conference held by the Carolina Farm Stewardship Association brings together a wide range of food and farming practitioners from North and South Carolina.

The Appalachian Sustainable Agriculture Project hosts its annual Family Farm Tour in June, featuring dozens of farms in 6 WNC counties.

Blue Ridge Women In Agriculture (BRWIA) hosts its annual High Country Farm Tour in early August, featuring farms in Watauga and surrounding counties. (www.brwia.org)

The Southern Sustainable Agriculture Working Group (SAWG) hosts its annual conference in January, featuring a large mix of food and farming practitioners from all over the southeast.

Incubator Farms

Incubator farms allow new and beginning farmers to learn about running their own farm. Typically, these farms provide affordable leases of farmland for production in tandem with training in a wide range of farming skills, including marketing and financial management. One of the more established incubator farm programs in the state is the PLANT at Breeze Farm ("People Learning Agriculture Now for Tomorrow") in Orange County close to Chapel Hill. Following an 8 week course, new farmers may lease land at the farm to start growing their own crops. <http://www.orangecountyfarms.org/PLANTatBreeze.asp>. Cabarrus county is also setting up a farm-incubator program.

FFA, 4-H, and School Gardens

Future Farmers of America (FFA) has a chapter at Watauga High School, which regularly hands out Greenhand Degrees for students who have completed one year of agricultural education and have a supervised agricultural experience. FFA students learn skills and compete with other schools in livestock judging, agricultural mechanics, and public speaking.

Watauga County 4-H is organized by Watauga County Cooperative Extension to serve youth ages 5 to 18, their families, and adult volunteers interested in creating quality time with young people. 4-H hosts after school programs, a Poultry Club, gardening workshops, and summer camps that help to keep children connected to their rural heritage.

School Nutrition and Garden programs also help children in Watauga to connect with local foods. Watauga's Family and Consumer Science Agent holds regular programs to educate children about where their food comes from and how to eat healthy and local.

KEY ISSUE: PROTECTING FARMING

Protecting farming is a complex challenge, since farming means different things to different people. It may mean the ability of a farm family to support itself by working the land. It may mean the ability of local farms to produce food for local markets. It may also mean the public benefits of open space and scenic agricultural landscapes that result from stewardship of farmland. The challenge is to develop strategies that address each of these values appropriately. Outreach to existing farmers can and should include information about transitioning to production of foods and products in demand by local markets. This is especially important as income from tobacco has been greatly reduced for farmers in Watauga and many other counties in North Carolina. Incomes from traditional commodities such as raising beef cattle have not approached the income from tobacco. Christmas tree production and production of nursery crops for the green industry has offered a viable non-food alternative for Watauga farmers.

Addressing the needs of farm families requires strategies such as protection of farm equity; promoting profitable farming options; and requiring the public to share in the cost of protecting the open space that results from farming the land.

In addition, incentives and opportunities must be created for new farmers to enter agriculture as a career or, as many are finding, as an avocation (or “calling”)

- Affordable Access to Land and Equipment. Options available to beginning farmers include internships and apprenticeships, equitable farm leases, farmer partnerships and cooperatives, farmland trusts, and farmer incubator programs
- Farmer Training and Mentoring. North Carolina is rich with training and mentoring options for beginning farmers, including academic programs, peer-to-peer programs and conferences, and incubator farms.
- Access to Operating Capital to Start or Expand Operations – farm operating credit from banks requires collateral (assured income) either from the farm or home, or from crop insurance and disaster program coverage.
- Risk Management and Agricultural Disaster Relief Programs, crop insurance – generally not available for diversified farms and specialty crops.
- Disability and health insurance (at least 27% of NC farmers are uninsured as of the 2002 census. The number may be much higher than reported). Those that do pay high prices or have high deductibles with just catastrophic coverage. This places farms at risk.
- Networking with Beginning Farmers. Grassroots organizations offering support and networking opportunities for new farmers include the Crop Mob in the NC Triangle region, and the Greenhorns, a national network of young farmers based in New York. Similar initiatives are emerging in WNC.
- Cultivate Mid-scale Operations that can meet the volume and price demands of larger institutional and retail markets.

Comparing the Benefits of Agriculture and Development. Agriculture has clear benefits to the public, particularly residents who are concerned with the costs and quality of life impacts of accelerating development. Development has the potential to increase markets for local farm products and generate revenues for improved food infrastructure. These tangible and indirect benefits from agriculture that Watauga residents enjoy must be weighed carefully with the increased costs of services associated with development. Counties can work with state programs to take steps to encourage and support farming –

such as promotion of processing and distribution facilities to get farm products to market, and promotion and branding of local farm products, such as “Watauga Farm Fresh” or “High Country Grown”. Watauga can position itself as a destination for mountain foods, to bolster both the growth of its tourist economy and the viability of its farms and local food businesses.

KEY ISSUE: FAMILY FARM TRANSITION PLANNING

Farm families around the country, across the state, and in Watauga County are facing many of the same difficult decisions. The American Farmland Trust estimates that in the next 10 to 15 years, up to 70 percent of the privately-owned rural land in America will change hands. As the farming population ages, and with the average farmer in Watauga County at 62 years of age, transition plans are needed for the farm itself, and the business of running the farm. A survey of over 3,000 farmers by the North Carolina Farm Transition Network (NCFTN) found that the majority do not have transition plans in place for their farms.

A transition plan generally includes estate planning such as a will or other legal instrument identifying future owners and operators of the farm. In some cases insurance policies, farm leases and even agricultural easements may be part of the planning process. NCFTN points out that farmers must manage risk by planning ahead for “the five D’s” – death, disability, disaster, divorce, and disagreements. These topics are difficult to discuss, but without having contingency plans in place, the future of the family farm is constantly at risk from unforeseen events.

In many cases, the children of today’s farmers have other occupations and do not want to go into the business of farming. Even so, with many farmers planning to never retire, and/or counting on income from the sale of their farms as their retirement package, Watauga faces a shifting pattern of farm ownership and management in the coming years. With a number of outcomes possible for each farm, and with many farms transitioning in the next decade (with or without transition plans), the challenges and opportunities for strengthening the agricultural economy will be magnified.

Many heirs find that the liquidation of farm assets through the sale of the farm is often the most efficient way to settle an estate. Sale for development may generate short-term profits for families, yet long-term effects of fragmentation of farming communities. Transition planning includes exploring other options for generating income such as selling the farm to another farmer, mentoring programs where new or beginning farmers apprentice on the farm and eventually purchase the business, and farmland preservation strategies such as the sale or donation of agricultural easements.

In recognition of the importance of transition planning, the USDA recently announced its Transition Incentives Program, which allows farmers to extend their Conservation Reserve Program payments by 2 years if they agree to lease or sell their land to a new or beginning farmer.

The North Carolina Farm Transition Network (www.ncftn.org) is an important resource for anyone dealing with these issues. The website includes a Land Link service that helps to match new and beginning farmers with existing farmers looking to lease or sell land. In addition, Appalachian Sustainable Agriculture Project (www.asapconnections.org) offers a similar service with postings of Farms and Land for sale or lease, and jobs and internships posted on the Classified section of its website.

KEY ISSUE: PART-TIME and NEW FARMERS

Part-time or residential/lifestyle farmers make up the largest demographic group among Watauga County farmers. According to the 2007 Census of Agriculture out of 587 farms, 282 considered themselves residential/lifestyle farmers, and 133 farms were listed as retirement farms. Only 200 operators listed farming as their primary occupation.

These numbers reflect trends across the state, in which 54 percent of the operators on the 52,913 farms in NC did not list farming as their primary occupation. These part-time farmers are part of a larger group of small farms (defined by the USDA as having annual sales of less than \$250,000) that made up 85 percent (45,191) of all farms in the state. Of these part-time farms, 17,917 classified themselves as a small family residential/lifestyle farm. Another 11,712 were classified as retirement farms. The USDA defines residential farms as farms whose operators reported that their major occupation was something other than farming, and retirement farms as those whose operators were retired.

Residential/lifestyle and retirement farms accounted for 29 percent (2.14 million acres) of the 8.47 million acres of farmland across the state. In Watauga County residential/lifestyle farms made up 19,929 out of 45,572 acres of farmland according to the 2007 Census of Agriculture. Retirement farms made up another 7,683 acres. Together retirement and residential/lifestyle farms made up 60 percent of Watauga County farmland. This percentage is higher in a mountain county such as Watauga where farms tend to be smaller and decreasing, and landowners own and manage land for a variety of reasons in addition to agriculture. The owners of many of these small farms are increasingly important to the future of farming in Watauga as potential new farmers or renters of land to farmers.

The majority of farmers participating in local agricultural markets are likely part-timers. Part-time farmers make up most of the cattle farm operators as well as most of the Choose-and-Cut Christmas tree farms. Off farm jobs allow them to invest in land which becomes a part of their investment portfolio and allows them to lead the rural lifestyle they desire. Policy makers would be wise to recognize the ability of part-time farmers to hold and steward the land. County policies that incentivize land stewardship will help to ensure that those who have invested much of their income in land and agriculture will continue to do so.

New farmers are generally part-time farmers who have invested non-farm income in land, including leasing or purchasing land. This is an opportunity for Watauga County; particularly to educate small landholders on farming practices and potential markets. Facilitation of rental agreements and education about land investment decisions would also be helpful to new farmers.

KEY ISSUE: LAND USE PLANNING

County Ordinances

The main ordinance addressing agriculture in Watauga County is the Voluntary Farmland Preservation Program ordinance.

Boone 2030 Land Use Plan

The Boone 2030 Plan focuses on developing a livable, walkable community within the town limits of Boone, including the last remaining farms. This overall vision is an important step toward promoting “infill development” in and around built-up areas and reducing sprawl on prime farmland outside of Boone. However, it does not address agriculture or urban agriculture specifically as an integral part of a livable community where food is grown where people live. Nor does it mention an important planning strategy for farmland preservation adjacent to developing areas -- the Transfer of Development Rights (TDR) approach. TDR’s could help to protect farmland by offering farmers in certain locations to sell their development rights to developers. Developers could then use these rights to build additional residences or commercial space in designated growth areas with the town limits. The farmers selling the rights would then enter into agricultural easements protecting some or all of their land.

Conservation Development Model with Agricultural Preservation

In cases where development on agricultural land is proposed, innovative ordinances can be adopted to allow for “conservation-oriented development” or conservation design, preserving the most viable farmland and farm infrastructure. The example of Hickory Nut Gap Farm in the Fairview community just east of Asheville offers one version of this approach. A working farm and farm-based business such as Spring House Meats and Flying Cloud Farm and a CSA next to the Drovers Road conservation development which was built on wooded slopes adjacent to the farmland. To the extent that residents of the development patronize the farm and are members of the CSA, this model can be considered a version of “Development Supported Agriculture.”

www.droversroad.com

<http://www.hickorynutgapfarm.com/index.php>

Regional Planning

Regional cooperation is key to the continued viability of farming in the High Country. Watauga is one of the seven counties that make up the High Country Council of Governments (www.regiond.org), a multi-county planning and development agency for the northwestern North Carolina counties of Alleghany, Ashe, Avery, Mitchell, Watauga, Wilkes, and Yancey. The purpose of this Council is to offer professional and technical services to member governments, serve as a forum for discussion of regional issues and interests, promote good intergovernmental relations, promote the region on a statewide basis, and serve as a voice for its member governments on issues affecting them. The High Country COG could play an instrumental role in strengthening the regional food and farming system through cooperative local foods marketing projects with tourism offices, farmland preservation projects with land trusts, and shared infrastructure such as public-private slaughterhouse facilities for local beef processing.

KEY ISSUE: FARMLAND PRESERVATION



Prime farmland for sale near Boone

Reversing farm loss is a challenge that requires a long-term, strategic approach that focuses on the profitability of farming. This includes reaching out to existing farmers and landowners to explain options and develop strategies tailored to meeting their individual needs (financial, family interests) for increasing the viability of existing operations, new ventures, and preserving farmland. Government agencies, land trusts, and advisors with legal, financial, and farm planning experience can offer this assistance to farm families.

It should be noted that farmland preservation is distinct from open space protection. The priority of protecting a critical mass of viable, working farmland with productive soils as a long-term strategy supporting Watauga's agricultural economy is different than the priority of protecting scenic viewsheds along public roads and recreational open space accessible to the public. Some of the county's most viable farms worthy of voluntary protection from development may not be in scenic viewsheds and would not work well as publicly accessible recreation areas. What value does the land base of viable, working farmland have to the community? How can this value be quantified?

Funding options for farmland preservation are limited. In 2009, only \$2 million was available statewide through the NC Agricultural Development and Farmland Preservation Trust Fund as matching funds for land trusts to use in purchasing agricultural easements from willing landowners. These easements are described in the *Farmland Preservation Toolbox* section below.

Some NC counties, including Buncombe, have allocated county funds to match state and federal farmland preservation dollars. Between 2005 and 2007, Buncombe allocated \$4 million toward purchasing agricultural easements, and this amount leveraged an additional \$2.57 million. These funding allocations result from ballot initiatives that must be approved by a majority of voters in the county. They often reflect the public demand for scenic agricultural landscapes as a value worth protecting. For many voters, these aesthetic values are separate from the need to preserve farm production in their communities.

Conservation Partnerships: Farm Prosperity Project



The Farm Prosperity Project (FPP) was a 4-year effort led by NCSU to promote the profitability of farming and the protection of mountain farmland in WNC. By providing farmers with tools to help them make decisions about their farms and futures, and identify new crops, marketing strategies, and farm protection tools best suited to their situations. FPP serves as an important resource for the region.

The FPP effort identified eight (8) factors affecting the decisions made by farmers in WNC: farm income; local sales; pest pressure; development pressure; satisfaction with farming; time with family; farm succession planning; and balanced carbon budget. They also identified six (6) New Crop and Agricultural Enterprise areas appropriate for the smaller mountain farms and regional markets of WNC: specialty fruits and vegetables; organic production of fruits and vegetables; specialty nursery crops; value added enterprises; agritourism; specialty meats and cheeses. Each of these is explored in detail in this Plan. The project included 3 years of field trials on organic and heirloom tomatoes and arrived at the conclusion that, while challenging to grow, these crops could be highly profitable for farmers. This diverse partnership of academic, government, and nonprofit land trust partners has compiled valuable information which is available on the FPP website: <http://www.ces.ncsu.edu/fletcher/programs/herbs/prosperity/>

Farmland Preservation Toolbox

Voluntary Farmland Preservation District -- Watauga's VFPD is an important first step for many farmers in considering their options for farms. This program is modeled after the statewide enabling legislation for Voluntary Agricultural Districts. Current VFPD boundaries and adjacent farmland areas for expansion of the district are shown on the Potential Agriculture District Growth map (Appendix I)

The District benefits farmers by protecting them from nuisance lawsuits filed by neighbors, requiring a public hearing process for condemnation of land enrolled in the district, reduction or waiving of water and sewer assessments if the land is not connected to the utility, and helps to raise awareness in the community about farming as a way of life. Landowners must agree to a 10 year contract agreement with the county prohibiting non-farm use or development, except for creation of up to 3 lots based on county zoning and subdivision standards. The agreement is revocable at any time by the landowner with a 30-day notice. An enhanced District requires an irrevocable 10 year agreement to keep the land in farming, and can increase the amount of cost share funds and state grants available to farmers. Enrolled farms are automatically renewed for 3 additional years unless the landowner opts out of the District in writing.

Present Use Value Tax is another tool for farmers to commit to keeping their land in farming or forestry over a 10 year period in return for a reduced tax rate.

Agricultural Conservation Easements are one of the most successful strategies statewide and nationwide for balancing the financial and estate planning needs of farmers with the community-

wide goals of keeping land available for farming. Agricultural easements are voluntary agreements between a landowner and a land trust or government agency restricting development permanently or for a period of time. These agreements are generally written to promote ongoing use of the land for farming, and may allow additional residences consistent with running a farm operation. Easements may be donated or sold at a bargain rate as a charitable gift for tax purposes, or may be purchased outright with farmland preservation funding. The value of an agricultural easement is calculated by a certified appraiser, and is based on the full, unrestricted market value, minus the market value as a restricted farm. The difference between the two is the estimated value of the agricultural easement.

Farmland Preservation Priorities – This Plan provides a ranking system for prime farmland areas (not individual farms) based on criteria such as prime agricultural soils, large contiguous blocks of working farmland, and proximity to Voluntary Farmland Preservation Districts. Even this basic assessment shows patterns emerging, with certain sections of the county highlighting agricultural features that would help to attract farmland preservation funding from federal, state, or other sources. As is true of counties across the state and the nation, Watauga County is in a position to work with landowners and land trusts on a much more detailed assessment to determine which landowners have an interest in discussing farmland preservation options, and how limited dollars could best be spent.

Funding Farmland Preservation

Local – farmland preservation has been funded in communities across the country as voters in many areas are coming out in support of protecting rural heritage. With strategies including bond issues, real estate transfer taxes, earned income taxes, and private donated funds, county dollars have leveraged federal and state grants ranging from 3 to 5 times their value.

State Matching Funds – the NC Agricultural Development and Farmland Preservation Trust Fund is an important vehicle for slowing the loss of farmland in the state. One of its weaknesses is the lack of dedicated funding, which means that each year the Fund's budget must be negotiated as part of the overall state budget. Other states such as Pennsylvania have a dedicated farmland preservation fund paid for in part from cigarette taxes and real estate transfer taxes. Other state funds such as the Clean Water Management Trust Fund have been used to indirectly preserve farmland by directing dollars to conservation easement projects protecting high priority waterways on certain farms.

Federal Matching Funds – the primary source of federal funding for farmland preservation is the Federal Farm and Ranch Land Protection Program, which is allocated under the US Farm Bill to states through the USDA-NRCS. Qualifying farm projects may receive up to 50 percent of the easement value through FFRPP, which must be matched by at least 25 percent from the state and the remainder from county or donated sources.

KEY ISSUE: FOOD SECURITY



Food security in Watauga can be considered a separate discussion from agricultural development and farmland preservation. Problems such as poverty, obesity, and diabetes are all components of community food security, but are not directly related to farming. All of the food demand and nutritional needs for Watauga residents, including low-income residents, can be met from food produced outside the region, provided that food is affordable and of good quality. However, the question can be asked – what role can Watauga’s farms play in supplying fresh, healthy, affordable foods to improve the diets of local residents?

The Summary Food and Farm Assessment (Appendix VI) notes that an estimated 18.9 percent of county residents were living below the poverty level in 2008, more than 50 percent above the regional average for WNC. The potential for farmers and food businesses to work with nutrition programs, food banks and soup kitchens is an important consideration.

The Hunger and Health Coalition works to relieve poverty and hunger for individuals and families in Watauga, Ashe and Avery Counties who are experiencing economic hardship. Through its food pantry, the Coalition may serve over 1,400 people and its market may provide more than 1,700 meals per month. Much of the food they obtain comes from donations of packaged foods, with some produce.

In many cases, because of the efficiency of computerized systems for tracking food in grocery stores, many food pantries and food banks around the country are finding less waste and therefore less surplus food available. This is an opportunity to develop stronger relationships between community food programs and farmers in Watauga – and to even set up gleaning and contract growing programs. In some areas of the country, food banks are starting their own farms to ensure a steady supply of affordable, fresh produce. These trends can be considered the result of benevolent actions more-so than meeting direct food security needs. Local farms and food distributors could have an important role to play in working with food banks and pantries. Ashe Outreach Ministries also provides food for low-income and elderly residents.

KEY ISSUE: FORESTRY



Most mountain farms include at least some forest land, and in some cases forested land may be as much as 80 or 90 percent of the total acreage of a given farm. Approximately 70 percent of the forestland in Watauga is privately owned, with oak-hickory as the predominant type, and smaller amounts of birch-beech-maple, spruce-fir, and oak-pine. Present Use Valuation of forest lands offers some tax relief for forest landowners, and requires a forest management plan prepared by a registered forester. Forest management ties into the agricultural economy in some ways that are more traditional, and others that are new and innovative, or a combination of both. Developing new strategies to generate income from forest products (both timber products and non-timber products) is an essential part of Watauga's farming future.

Timber management has historically provided farmers with lumber for on-farm use to construct buildings, fences, and wagons, and for home use as firewood. Timber is one way that landowners manage land as an investment. Timber sales have been a source of supplemental income for many farms, particularly by working with local saw mills, foresters, furniture makers and craftspeople. The North Carolina Division of Forest Resources (NCDFR) provides a list of timber buyers in Watauga and the surrounding area that includes a total of 11 logging companies, 10 of which are based in the county – 3 in Todd, 3 in Deep Gap, 2 in Banner Elk, 1 in Boone, 1 in Vilas, and 1 in Warrentonville (Ashe Co.). Mountain Works logging company, based in the county, specializes in using draft horses for low-impact harvesting on steeper terrain.

At least 12 sawmills are listed by NC DFR as buying local timber in Watauga including 1 in Boone, 1 in Deep Gap, 1 in Jefferson, 3 in Millers Creek, 2 in Lenoir, 1 in Rutherfordton, 1 in Yadkinville, 1 in Crumpler, and 1 in Roan Mountain TN.

Sustainable forest management could play a more important role in the working landscape of Watauga County. The U.S. Forest Service publication, *Forest Statistics for North Carolina, 2002*, estimates an average of 5.7 million board feet per year of saw timber is harvested in Watauga County. Given the predominance of forest in the county, this number could be much higher.

Forestry cooperatives are becoming more common in the Blue Ridge Mountains. Under this approach, owners of contiguous parcels may form partnerships to manage multiple private forest properties according to a joint sustainable forest management plan supporting local forest products industries, recreation, and hunting.

Community forestry is another option, whereby municipalities, land trusts, or other organizations own and manage large tracts of forest as a community resource for sustainable economic development.

Growing markets for custom cut wood means that more forest acres can be managed for high value hardwoods for cabinetry and custom millwork, and beams for timber frame construction. Much of the harvested timber in the region is turned into pallets.

Non-timber products also continue to be an important part of the agricultural economy. These include collection of native medicinal herbs such as ginseng and goldenseal, collection of wild edible plants such as ramps, nettles and mushrooms, and hunting wild game. Developing new strategies to generate income from forest products, such as cultivation of ginseng, shitake mushrooms and other woodland mushrooms is a key strategy for diversifying farm income in the High Country.

FARMING SECTOR SUMMARIES

Christmas Trees



Current Status

Christmas trees are the highest value agricultural product in Watauga County, and the number two non-forest crop in terms of acreage. Watauga is known as the “Choose-and-Cut Capital” offering customers a chance to experience farms as part of a holiday family tradition in a growing agritourism sector. Watauga ranks 13th among the top Christmas tree producing counties in the nation and is ranked the 5th highest producing county in the state, grown mostly on small (< 10 acre) family farms. The 2007 Census of Agriculture documented 2,795 acres of Christmas trees in the county. North Carolina is ranked second in the nation in the number of trees harvested, with 1,600 growers producing an estimated 50 million Fraser fir trees (90 % of total) on over 25,000 acres. Approximately 25 percent of the farms statewide are Choose-and-Cut operations, and in Watauga this number is closer to 33 percent while the remainder are wholesale operations. The Watauga Christmas Tree Association supports growers in the county with technical and marketing assistance. They can be reached by phone at 828.264.3061 or on their website at www.wataugachristmastrees.org.

Cash Value = \$4,196,000

Acres (an estimated 1,500 acres of Christmas trees are grown in the county, amounting to just over 3 percent of the total agricultural acres producing approximately 36 percent of the total market value of farm products sold in the county in 2007.)

Growing Patterns and Conditions – Christmas trees are grown on many moderate to moderately steep, well-drained slopes in Watauga County, often in fields that are too small or steep for cultivation or grazing (Appendix I - Local Christmas Tree Farms map). The best soils are the Porter series, Chestnut complex, Fannan, and Edneyville series soils.

History of Production in Watauga During the 1950's and 60's, the Christmas tree industry in WNC became established, particularly with the production of native Fraser fir trees to allow mountain farms to gain a share of the southeast market dominated by northern and Canadian trees. As Fraser fir had naturally appealing qualities, sales steadily increased through the late 20th

century, with a spike in production associated with the tobacco buy-out. The trend has peaked, and is at or near an all-time high.

While prices have reached plateaus at various times, sales are projected to grow.

Trends in the Industry – the national market for Christmas trees is flooded and flat, due to overproduction of trees considered to be relatively poor quality compared to those grown in the High Country.

The Future of Christmas Tree Production in Watauga Christmas tree production in Watauga has reached a limit given current market conditions. The quality of the product can and should be improved. Potential markets for sustainably-grown trees should be pursued, with reduction in chemical applications benefitting the consumer and the local environment. Organic production presents challenges due to pests and the nature of diseases. Expansion for Christmas tree farms can include an increased focus on agritourism for year-round attraction, not just choose-and-cut. Christmas tree production sustains a substantial number of full time farmers as well as many part-time farmers. Continued research and educational programs in Christmas tree production and marketing will help keep this sector viable. In addition, promotion of Watauga County Christmas trees, both commercial and wholesale, will benefit this sector.

Beef Cattle



Current Status

Beef cattle is the second-highest value agricultural product in Watauga County, and the number one non-forest crop in terms of acreage (pasture). An estimated 7,500 head of cattle were reported in the county in 2007, and 9,800 in 2009 according to NCDACS-Agricultural Statistics. Western North Carolina is included in a large area of the central and southern Appalachian mountains devoted to cattle production. The majority of cattle farms are family-run cow-calf operations, raising primarily black angus, charolais, and Hereford cattle on grass and some grain (feed corn) to be sold at regional auctions such as those in Kingsport, TN and Abingdon, VA, and shipped to feedlots for finishing. A small number of farms produce grass-fed, locally-processed beef, though at this time there is no USDA certified organic beef produced in the

county. Kilby's livestock market in Wilkesboro and the Stockyard Bucking Company near Deep Gap both do video auctions for several cattle companies. Four Watauga farms are listed as selling local beef in the ASAP Local Food Guide. The Watauga Cattlemens' Association represents cattle farmers in the county by hosting field days, workshops, and dinners, and serving on the North Carolina Cattlemen's Association Board of Directors.

Cash Value A conservative value of \$600 per head would place the value of the cattle inventory at around \$5.9 million. Pasture usually rents for \$15 to \$25 per acre depending on how well it is fenced.

Acres – Pasture accounts for an estimated 29 percent of Watauga County's land (13,000 acres)

Growing Patterns and Conditions – the largest concentrations of pastureland generally coincide with the larger blocks for farmland in townships such as Beaver Dam, Cove Creek, Meat Camp and Stony Fork. Many small pastures exist, but maintaining fence on small plots can be cost-prohibitive.

History of Production in Watauga Beef cattle have been a strong part of the Watauga farm economy for years, though along with Christmas trees, they have become a stronger sector as production of other crops has diminished. Ashe Abattoir operated as a local slaughterhouse until the late 1990's.

Trends in the Industry Several key trends in the beef cattle industry may have bearing on how successfully Watauga's cattle farmers can adapt to changes. Increased volatility in the beef industry associated with projected increases in fuel costs, competition with biofuels for feedstuffs, ongoing consolidation of the industry into larger and larger corporations, distrust among consumers, and the rise of natural and organic markets all point to the potential economic advantages that small farms selling local beef may have over large scale producers. Grass-fed, local beef and organic or sustainably-produced beef are increasingly popular in many markets, including western North Carolina. The National Animal Identification System (NAIS) legislation will likely pose increased costs and challenges for small cattle operations, but these costs can at least be partially covered by increased profitability of locally processed beef over beef sold at auction.

The Future of Beef Cattle Production in Watauga

The growing regional market for local beef, whether "grass fed" or grain finished, holds promise for Watauga farmers. Organic and/or naturally-grown beef with limited antibiotics and hormones are also important and growing sectors of the regional and national markets. Local processing is key, and points to the potential for county governments and farmers to work together in establishing a shared slaughterhouse facility similar to one being planned with state funding in Cabarrus County near Charlotte. Provided that good pasture land is available with adequate fencing, cattle will continue as a major part of Watauga's agricultural economy. Developing economical fencing for small pastures will support this trend.

Conventional Vegetables



Bottomland fields with cabbage (left) and corn (right)

Current Status

Sales of vegetables, melons, potatoes, and sweet potatoes are among the top commodity group behind Christmas trees and cattle in Watauga County. \$259,000 in sales were reported in this category in 2007, up dramatically from \$115,000 reported in 2002. This is approximately 2 percent of the total agricultural income for the county. A growing number of farms (52 farms, up from 40 farms in 5 years) are considered vegetable operations, most of which sell locally. The majority of conventional vegetable growers in Watauga are on small to mid-sized farms of 50 acres or less, and are family-run operations. Among the largest producers are family-run companies such as Hollar and Greene and Critcher Brothers, raising and shipping cabbage and potatoes out of the region and out of state. The estimated acreage of land producing conventional vegetables in the county is between 250 and 500, based on a value of approximately \$1,000 per acre.

Cash Value \$259,000

Growing Patterns and Conditions – vegetable production appears to be scattered across Watauga County, with the only apparent areas of concentration being along relatively flat, fertile bottomlands, particularly on the Watauga River and the New River and major tributaries. Some of the cabbage production is concentrated in the southeastern part of the county.

History of Production in Watauga -- vegetables have clearly been a part of Watauga's farming history, with the production of cabbage and sauerkraut, potatoes, and green beans during the early- to mid-20th century as the particular highlights. Today, diversified small farms and the use of season-extenders such as row covers, hoop houses and greenhouses have widely expanded the variety of vegetables grown in the county.

Trends in the Industry - Nationally, trends in vegetable production include further consolidation of large industrial farms, growing demand for nationally-distributed organic vegetables, and a dynamic and growing market for local, sustainably-grown vegetables. Production of potatoes and cabbage rotates through different regions of the country depending

on the season. Fermented foods, which include sauerkraut, are also experiencing increased demand.

The Future of Conventional Vegetable Production in Watauga

Throughout WNC, there is interest in establishing more mid-sized farms (25 – 50 ac) with cultivated areas of 1 to 10 acres producing vegetables for regional markets. Key crops could include cabbage for sauerkraut and other uses, heirloom potatoes and tomatoes. With the exception of cabbage and potato distributors, it is likely that conventional vegetables grown in Watauga will serve regional markets. The prevalence of large scale vegetable farms throughout eastern NC and much of the southeast, and the distance to East Coast markets are important limiting factors for wider distribution, as is the availability of labor for WNC farmers.

Organic/Sustainably Grown Vegetables



Watauga Farmers Market



Late fall row covers, Watauga River Farms

Current Status

Organic and sustainably-grown vegetables are not as easily tracked separate from conventional vegetables grown in Watauga County; however, their increasing presence in farmers markets, groceries, CSA's, New River Organic Growers (NROG) and other distributors, and the growing dollar value of vegetables sold in Watauga indicates that organic and sustainably-grown vegetables are becoming an important part of the agricultural economy. The majority of organic/sustainable vegetable growers are small-scale (< 10 acres) family-run operations. Many local farms operate with 3 acres or less under cultivation. Operators are often individuals who are retired or semi-retired from other jobs, and a growing number of young/beginning farmers. These farms are part of a growing segment of operations leased or owned by part-time farmers and landowners. Most small growers market their produce through the Watauga Farmers Market, NROG, Community Supported Agriculture (CSA) operations such as the multi-farm High Country CSA, on-farm sales, or directly to restaurants and grocery stores. While Buncombe County and the Asheville area lead the region in the number of farms listed in the ASAP Local Food Guide, Watauga is one of the top-tier counties listed.

Cash Value N/A

Growing Patterns and Conditions – the Local Agricultural Infrastructure map (Appendix I) shows food-producing farms, many of which grow organic and/or sustainably-grown vegetables. These farms are not concentrated in any one part of the county, but are generally found along bottomlands and rolling fields rather than on steeper wooded slopes and ridges with thin soils.

History of Production in Watauga -- while small-scale vegetable production for home use and local sale at small markets and general stores has been part of Watauga's history, the 34-year history of the Watauga Farmers Market is an indicator of the more recent and growing focus on the value of fresh, local foods.

Trends in the Industry – large scale organic vegetable production is fast growing. Demand for local sustainably grown and organic vegetables is increasing, and in general this means increased opportunity for small-scale farms. Year round production and global distribution of vegetables ranges from S. America, Central America, Mexico, to the southern US, northern US and Canada, and international imports of hothouse tomatoes from Holland or organic spinach from China. Winter vegetables grown in high tunnel hoop houses or greenhouses is growing in popularity to meet demand for local and organic vegetables. Growing demand for sustainable and organic vegetables is also coming from institutional buyers and restaurants.

The Future of Organic/Sustainably-grown Vegetable Production in Watauga

Watauga is well-positioned to become a hub in the High Country for sustainably-grown mountain foods and a strong producer of organic and sustainably grown vegetables as part of the WNC regional food system. Part of Watauga's strength lies in its accumulated knowledge of how to grow mountain produce, and its ability to train young farmers through ASU and Maverick Farms. It also has ready access to growing markets for sustainable produce, such as the Tri-Cities area just to the northwest. Neighboring counties such as Ashe, Avery, Mitchell counties may have lower land values and similar growing conditions and market access, while in some cases benefitting from greater labor availability. Multi-county processing infrastructure such as the Madison Farms example can play a key role in allowing these counties to work together on farm-to-school, farm-to-hospital, and similar programs.

As distributors such as NROG and Eastern Carolina Organics are demonstrating, Watauga's strength also lies in the timing of its High Country growing season – with vegetables such as tomatoes coming on later in the season, after those in the Piedmont are mostly finished. This allows for some vegetables to be marketed to population centers out of the region if distribution costs can be covered through backhauling and other strategies. As the Watauga County Farmers' Market continues to expand, and local food restaurants and farm dinners help to promote the area as a mountain food destination, opportunities for selling specialty vegetables will increase. Growing vegetables for local institutions can open up an important market for contract grown sustainable produce, such as winter greens for ASU, potatoes for Watauga County Schools, and cabbage for the hospital.

Fruits, Tree Nuts, Berries (Conventional/Organic)



Current Status

Fruits, tree nuts, and berries are among the top-selling agricultural products in Watauga County, with an estimated 25 farms generating over \$250,000 in sales in 2007, or approximately 2 percent of the total farm revenues. The High Country climate is well-suited to fruit and berry production and there is room for expansion to meet growing demand in markets across the state. The majority of conventional and organic/sustainable fruit growers are small-scale (< 10 acres) family-run operations, and include many individuals who are retired or semi-retired from other jobs, and a growing number of young/beginning farmers. Small growers market their produce through the Watauga County Farmers Market, New River Organic Growers, CSA operations, on-farm sales, or direct to restaurants and grocery stores.

Cash Value \$250,000

Growing Patterns and Conditions – fruit and nut producers are generally scattered in Watauga County. Since they require less cultivation, they are often found on steeper land than some other crops, and generally on relatively well-drained soils. Apple orchards are often found in areas with good air circulation to help prevent disease.

History of Production in Watauga Fruit production for home use and local sale at small markets and general stores has been part of Watauga's history, with strong apple production in the region in the early- to mid-20th century. Wild blackberries grow well in the region, an indicator that cultivated varieties will also grow well, along with blueberries, raspberries, grapes and apples. Several of the older orchards remain in the county, some with a remarkable diversity of heirloom apple varieties. The 34-year history of the Watauga Farmers Market is an indicator of the more recent focus on local fruits.

Trends in the Industry Larger companies produce and buy raspberries, blackberries, and blueberries following a year-round schedule of production and global distribution, from Chile to Mexico to Florida, North Carolina, and north to New Jersey, Michigan, Maine, and Canada. Year

round demand for local, organic, and sustainably-grown fruits is increasing from consumers, institutional buyers, and restaurants.

The Future of Fruit Production in Watauga

Berries have the potential to be among Watauga's most profitable crops, and can be sold in the region and to larger markets in the Piedmont where local berries are not commonly found, with the exception of strawberries and some blueberries. Organic berries are an important niche market. Canning fruits is an important season extender, and farms in the Asheville area are finding markets for making jams and preserves using the Blue Ridge Food Ventures commercial kitchen and buying from other farms in the region. Local and regional demand for heirloom apples and apple products may also be expected to continue to grow, particularly organic apples. Production could be expanded significantly beyond the estimated \$250,000 in annual sales. Assuming that between 500 and 1,000 acres in the county are currently in fruit production, this amount of acreage and revenue could be doubled in the coming years to meet growing demand for fruits in WNC and to the east.

Dairy (Cow, Goat, Sheep)



Ripshin Goat Dairy

Current Status

There are currently several active dairies in the county, primarily goat's milk dairies. There is one active cow's milk dairies in Watauga on the Ashe County line. As of the 2007 Census of Agriculture, an estimated 228,100 pounds of milk were produced in the county, some of which is marketed as fluid milk, and the rest to make cheese and other processed dairy products. Based on acreage requirements for goats, the total acreage supporting these dairies is estimated to be less than 100 acres. The majority of dairies in the county are small-scale (< 10 acres) family-run operations. Small dairies produce goats milk, cheeses, yogurt, and market their products through the Watauga County Farmers Market, New River Organic Growers, CSA operations, on-farm sales, or direct to restaurants and grocery stores.

Cash Value \$32,000 (sheep, goats, and their products)

History of Production in Watauga Dairy production for home use and local sale at small markets and general stores has been part of Watauga's history, with many families keeping a milk cow or small dairy herd. The dairy industry peaked in Watauga in the mid 20th century when milk was sold to regional dairies. The county's cow's milk dairies declined in the late 20th century, as industry consolidation, refrigerated trucking and larger dairies allowed milk to be shipped into the area cheaply from other parts of WNC. This trend is evidenced by the prevalence of unused and decaying barns and silos in the county. The recent increase in small goat and sheep milk production in the region is an indicator of the more recent focus on local, artisan farm products.

Trends in the Industry While demand for organic milk is growing nationally, commanding premium prices, producers in WNC generally agree that the cost of grain, lack of access to organic grain, and the organic certification process are major barriers to small mountain farms producing organic milk. Large dairies in the west and large dairy cooperatives in both conventional and organic milk production dominate the market. According to a Survey of Licensed Dairies in Western North Carolina (ASAP, 2007), there are several cooperatives that work with farmers in WNC: Dairy Farmers of America; Piedmont Milk Sales; and the Maryland and Virginia Milk Producers Association.

The Future of Dairy in Watauga

The regional demand for local, artisan, and organic foods means that increased production of goats and sheeps milk products on Watauga's farms is likely to be viable, while the viability of cows milk production is probably likely only on a very small scale, perhaps in conjunction with larger multi-farm CSAs and farmers' markets. Watauga is unlikely to see a resurgence of cows milk dairies given the larger production possible in counties such as Alleghany and those to the east and west with lower elevations and more accessible road networks. Multi-purpose Heritage breeds such as Scottish highland cattle, and red devon cattle may offer opportunities for niche marketing of cows milk. State standards prohibiting sales of raw milk limit the options for farmers to meet the growing demand for raw milk products. Regional demand appears strongest in large markets such as Asheville, where the highest concentrations of goat dairies are located. A goat dairy located in Mitchell County has recently obtained a contract to supply the regional chain of Greenlife natural grocery stores. This may be an indication of growing market demand and opportunities to diversify the variety of local dairy products.

Poultry (Chicken, Turkey, Ducks, Geese, other)



Current Status

Watauga has a wide number of small farms producing chickens, turkeys, or other poultry meats for sale in the county and meat and/or eggs for family consumption. Poultry is a relatively low-value agricultural product in Watauga County but still an important local source of protein. Only 10 commercial poultry and egg producers were listed in the county in 2007, generating an estimated \$24,000 in sales, a relatively small amount compared to potential demand. The majority of poultry producers are small-scale (< 10 acres) family-run operations. Most produce broilers processed on-farm (less than 1,000 per year) and market their products through the Watauga Farmers Market, New River Organic Growers, Community Supported Agriculture (CSA), on-farm sales, or directly to restaurants and grocery stores. Raising of backyard chicken flocks for egg and some meat production continues to grow in popularity in the county. One of the state's largest areas for broiler production is east of Watauga, near Lenoir. A new plant for processing small flocks of locally raised poultry is proposed for Marion, and will likely expand production in the Asheville and Hendersonville area to meet growing demand in the region.

Cash Value \$24,000

Growing Patterns and Conditions – there are no apparent concentrations of chicken and egg producers in Watauga. They are raised on small farms and homesteads across the county.

History of Production in Watauga Poultry production for home use and local sale at small markets and general stores has been part of Watauga's history, with many families keeping a backyard flock for eggs and meat. The poultry industry peaked in Watauga in the mid- to late 20th century when larger-scale chicken processing plants opened up in places such as Wilkesboro. Many farms built sizable chicken houses and raised chickens year-round for sale to these companies; however feed prices and transportation costs were relatively high. Local chicken feed was generally not available. This decline is evidenced by the prevalence of unused chicken coops in the county, often large, 2-story wooden structures with natural daylight.

Trends in the Industry Nationally, huge chicken/turkey growing areas can be found in the eastern North Carolina and the mid-Atlantic states. Growing demand for organic, “natural” and free-range chickens means that large processors like Tyson and Purdue have “natural” brands. Demand for natural chicken is growing among institutional buyers and restaurants.

The Future of Poultry in Watauga

The recent increase in local free-range or pastured poultry production is an indicator of the more recent focus on local, artisan farm products and heritage breeds such as Buckeye and Dominique chickens and Bourbon Red Turkeys. Duck and goose production for regional restaurants and CSA's may also be a new market. Backyard flocks are becoming popular in towns such as Asheville and Durham. The proposed construction of a poultry processing facility in Marion could open up opportunities for small scale production and even for growing organic local chicken feed. Increased USDA allowances for the number of birds processed on-farm could contribute to a rise on local production as well. Given the relatively small amount of revenue generated from poultry production in the county, expansion of pastured poultry could easily double in coming years.

Other Meats (Pork, Lamb, Goat, Rabbit, Bison, Venison)



Current Status

There are currently a small number of farms in Watauga producing pork, lamb, goat, and rabbit for sale. Hog production is probably the most common of these, with 4 farms listed in 2007 generating \$7,000 in income. 21 farms are listed as sheep and goat farms in the county, with \$32,000 in income shown. Sugar Grove Hams near Vilas serves as a local source of slow cured country hams which may come from local farms. While goat dairies may account for much of the income shown, goat meat is a necessary byproduct of the dairy goat industry, as male kids must be sold. The majority of other meat producers are small-scale (< 10 acres) family-run operations. The total acreage allocated for other meats is difficult to calculate, but given the relatively small revenues shown the amount is likely to be well below 100 acres. These can be marketed through the Watauga Farmers Market, New River Organic Growers, Community Supported Agriculture (CSA), on-farm sales, or directly to restaurants and grocery stores. One of the main limitations for processing local meats is the distance of 70 to 100 miles roundtrip for hauling animals to small scale slaughterhouses to the east.

Cash Value \$39,000

Growing Patterns and Conditions – other meat production is scattered about the county, with no apparent areas of concentration. Pastured pork and goats in particular can handle rough forage and steeper terrain.

History of Production in Watauga -- as with many Appalachian communities, it is said that most farm families kept one or a few hogs to slaughter each winter. The mountain tradition of country hams is still strong in the area. Goats and sheep may have seen periods of higher production, particularly sheep for wool and meat in the early 20th century.

Trends in the Industry National trends include massive industrial production of pork products in eastern North Carolina, including pork shipped to China to meet growing demand. Lamb is growing in popularity in the US, however much of it still comes from New Zealand. Goat meat is growing in popularity with Caribbean and Middle Eastern immigrant populations.

The Future of Other Meats in Watauga

Local pastured pork will likely have a strong market in the region. The North Carolina Natural Hog Growers Association is seeking producers in WNC. Specialized cured and smoked meats may be an important value-added product for local farmers. The increasing interest in artisanal cheeses from goat dairies and growing regional populations of ethnic groups that eat goat meat means that availability may exceed demand in the region. Rabbits produced for restaurants and home consumption have been selling in the region. Establishing breeding populations of regional heritage breeds of sheep, pork and goats may increase interest in these meats. Watauga stands to benefit particularly with improved access for processing. A small-scale slaughter facility located for use by High Country farmers would be a key requirement for expansion. Watauga has ample available pasture land and woodland edges that could be converted to rotational grazing systems for hogs, lamb, and other meat animals. The acreage devoted to this pasture could easily double in the coming years to exceed 100 acres.

Other Specialty Farm Products



Current Status

There are a growing number of farm-based businesses listed as selling specialty farm products in the county. A wide range of alternative products are produced in Watauga, including: wine grapes, beer hops, hard red wheat, grains, cut flowers, honey (sourwood, poplar, locust, wildflower), sorghum, eggs, lambs/alpacas, sheeps wool, soybeans/peanuts, herbs (culinary, medicinal), spring transplants, seeds, mushrooms (shitake, oyster, wild), woodland botanicals (nettles, ramps, ginseng, goldenseal, fiddleheads, nuts, berries), nursery, horticulture. Sales of these products are difficult to track and are not included specifically in USDA Census data; however, it is safe to say that they represent important sources of income for many small farms in the county. The majority of specialty farm products are produced on small-scale (< 10 acres) family-run operations. . Most market their products through the Watauga County Farmers Market, New River Organic Growers, Community Supported Agriculture (CSA), on-farm sales, or directly to restaurants and grocery stores. Producers of specialty products such as beeswax and honey can participate in the Watauga County Beekeepers Association. Nearby Madison County has a unique NC Mountain Mushroom Cooperative producing shitake and other woodland mushrooms.

Growing Patterns and Conditions – specialty farm products can be found on farms throughout the county, with no apparent areas of concentration.

The Future of Other Specialty Farm Products in Watauga

Watauga growers can continue to explore different specialty crops to find their unique niche. Vermiculture (worm castings for garden compost, red worms for vermicompost, night crawlers for fishing) is one area that is getting more attention. Processing of specialty foods in commercial kitchens such as the one in Ashe County will be an important aspect of this sector, and can include NCDA-inspected kitchens for food preservation and baking workshops, fermented foods, and canned foods. Small grains may offer important supplemental crops for farmers, including barley, oats, corn, peas, triticale, wheat – drying for local organic chicken scratch grains. Producing composts and manure teas, luffa gourds, birdhouse gourds, maple syrup, hydroponic lettuce, tilapia/basil, sprouts, sunflower greens, micro greens such as buckwheat lettuce, wheatgrass, edible flowers, and cut flowers, soybeans and peanuts can all be grown and marketed.

FINDINGS

Shifts in Agricultural Production

Watauga is experiencing a shift in its agricultural economy being felt throughout Western North Carolina. Tobacco has declined, profitability in the conventional beef cattle and Christmas tree markets is slowing or fluctuating, and demand for local and organic foods is coming on strong. Each year, decisions are being made by Watauga's farmers and agricultural professionals about how to diversify farming operations to adjust to and benefit from these shifts.

Farm Transition Planning

The aging farm population running Watauga's family farms is facing challenging decisions about how to transfer their farms and farm businesses to either the next generation of their family, or to potential buyers who may or may not continue their legacy. Creative strategies are needed to ensure that these decisions are made based on good information and a clear vision, so as to balance the needs of each retiring farmer and each beginning farmer. Watauga needs its next generation of family farms.

New and Beginning Farmers

Watauga is well-positioned in WNC to attract and retain talented and dedicated young farmers to strengthen the county's position as a local foods destination with a vibrant economy blending tourism, academics and agriculture. Creative strategies for land access, generational transfer of farms, and support networks for start-up farms are all necessary for new and beginning farmers to succeed in Watauga. In many cases in WNC, the acreages required by small intensive vegetable, fruit, or meat production are not large – often 5 acres or less are actively cultivated or grazed. NC counties promoting small farm establishment and incubation offer training and certification programs for as many as 10 to 20 new farmers per year. In conjunction with the ASU Sustainable Agriculture program, Cooperative Extension, and other educational opportunities, Watauga could support its own future by setting up programs to train new farmers. Five new local farmers could be trained each year and assisted in accessing plots of land of 5 – 10 acres to begin their farm businesses.

Part-Time Farmers

One of the strongest projected growth areas for agriculture in WNC and Watauga County are part-time farmers who do not rely on farming for their primary income yet produce farm products or lease land out to farmers. These landowners hold land as an asset in their financial portfolios.

Multi-County Cooperation

As a High Country community, Watauga shares many of the same agricultural conditions as neighboring counties of Alleghany, Ashe, Avery, Mitchell, Wilkes and Yancey. These counties together form the High Country Council of Governments, which has great potential to work together in promoting shared regional goals such as establishing the High Country as a tourist destination for fresh, local mountain foods. The ability for individual farms to prosper in part depends on the ability of neighboring counties to cooperate and meet economies of scale for

production, processing, storage, distribution and marketing of mountain grown foods. The examples of Madison Farms for processing produce or the proposed Marion slaughter facility for processing of small poultry flocks are indications that these important components of the food system must be in place and are more cost effective when financed and shared between counties.

Farmland Preservation

While saving *farmland* depends upon saving *farming* as a way of life, Watauga's limited area of prime agricultural soils and productive farmland is a county treasure that can steadily be lost to development. The Voluntary Farmland Preservation District is a beginning. The county and regional land trusts can work to generate funding strategies to leverage state and federal farmland preservation dollars, and with landowners to consider agricultural easements. Estimations of acreage needed to supply local food markets, combined with the growing number of part-time farmer/landowners desiring a rural lifestyle offer opportunities for preserving farmland and farming in Watauga. By matching food-growing farmers with landowners, and by training part-time farmers in food production, Watauga will help to ensure that sufficient farmland is available for meeting local demand now and in the future.

RECOMMENDED ACTIONS

The Actions recommended in this Plan and presented in this Section are organized according to the major topics identified in the Community Visioning Workshops, Farmer Surveys and interviews. As is true in any farming community, issues of land, economics, demographics/social factors, and food system infrastructure in Watauga are all interconnected.

LAND

Action 1) Develop Options for Enacting Present Use Value Tax Legislation for Similar Benefits for Smaller Food Producing Farms (< 10 acres)

Changing Present Use Value Tax Legislation requires an amendment of state law. Watauga County can work with the High Country Council of Governments and other communities across the state in looking for legislative opportunities to address the tax relief needs of smaller farms (10 acres or less) which do not come under the state and county standards for Present Use Value Tax. This is especially important in high-dollar real estate markets such as the Boone area where small growers are producing food close to population centers.

Action 2) Make Farmland Preservation/Preserving Farm Equity a Priority

Preserving or enhancing farm equity is critical to farm families – particularly families with small- and mid-sized farms who hold most of their wealth, and often their retirement income, in land. Protection of farmland as scenic open space is a public good that enhances the tourist economy and is worthy of funding to support farm owners willing to preserve their land. Watauga County must differentiate between farmland preservation for agricultural production and farmland preservation for scenic open space values. Agricultural production requires measures to keep families in farming. Scenic open space values requires a public commitment to financing the cost of working with landowners to set aside certain lands as protected open space.

If funding is available, Watauga County can assist farmers with transition planning by working with state, federal, and land trust professionals in securing grants for voluntary farmland preservation projects such as purchasing agricultural easements. Landowners have to option to voluntarily donate agricultural easements in return for federal tax benefits. Watauga County Soil and Water can join districts in other counties as a leader in accepting and holding agricultural easements. The County and its partners can reach out to additional farmers to expand the Voluntary Farmland Preservation District.

Subdivision and Land Development ordinance amendments can allow developers *options and incentives* for preserving farmland as part of new subdivisions (known as “development supported agriculture”), and transferring development rights (TDR’s) from prime farmland areas to areas capable of handling more intensive development. As other communities have proven, these conservation development options can be designed in a way that protects farm equity and even enhances the marketability of farmland even as new development occurs.

Action 3) Expand Programs and Funding for Optimum Farm Management

Watauga County Soil and Water, Cooperative Extension, and other agencies can continue to expand cost share funding and technical assistance for dealing with farm management challenges facing Watauga’s farmers, including:

- Integrated pest management and organic methods (including predatory nematodes for wire worms in cabbage, strategies for addressing clubfoot, and crop rotation with cabbage, potatoes, and onions);
- Transitioning to diversified crops and organics;
- Transitioning to rotational grazing and locally processed beef;
- Promotion and expansion of CREP, EQUIP, and streambank fencing programs.
- Assist small farms in leasing more land for sustainable pasture management, establish a fence cost-share program to leverage federal dollars for cross-fencing and livestock watering systems.
- Support generation of renewable energy to enhance the sustainability of small- and medium-sized farms. Federal initiatives and green communities support renewable energy generation by farms. State and local governments can support reasonable on-farm development of small-scale wind, solar, and micro-hydro energy generation to enhance sustainable agriculture.

ECONOMICS/MARKETS

Action 1) Assist Farmers in Identifying and Meeting Agricultural Demand

Watauga County can work with Appalachian Sustainable Agriculture Project, New River Organic Growers, and other organizations to assess regional markets and increase production of specialty niche crops including reviving sauerkraut as a popular, locally grown and processed fermented food in WNC. This can include a focus on outreach to the growing number of part-time farmers and non-farming landowners.

Support continued access to educational resources for both traditional and alternative agriculture. Such resources are available through NC Cooperative Extension, USDA-FSA and NRCS, as well as other organizations such as ASAP.

Develop public-private branding and marketing strategies for “Watauga Grown” or “High Country Grown” local farm products and value-added goods, and consider a “Buy Watauga First” campaign to promote local purchasing.

Assist farmers in developing limited liability corporations (LLC’s), limited partnerships and cooperatives, allowing them to pool resources for production, processing, marketing and distribution. Learn from models such as Eastern Carolina Organics and Sugar Grove Hams. Value-Added Producer Grants may be used to fund start-up projects.

Provide technical assistance for developing CSA’s, multi-farm CSA’s, and distribution partnerships or cooperatives.

Foster regional collaboration with neighboring counties on local food products and markets.

The County can assist with the proposed expansion of the Watauga County Farmers Market and facilitate the expansion of NROG and similar distribution partnerships for farmers.

Establish a “farm equipment lending library” starting with a Small Combine to encourage more farmers to plant and harvest small grains such as hard red wheat for local mills, organic corn and triticale for chicken feed, and other expanding markets. Encourage small grains such as nurse crops and double cropping strategies.

Action 2) Maintain and Distribute Watauga Local Food System Map

Watauga Soil and Water, Cooperative Extension, and the County Planning Office can collaborate in an annual update of the county Local Agricultural Infrastructure map to ensure that it accurately reflects the current state of producers, processors, distributors, farm support services, and markets for Watauga farm products. On-line digital versions and paper copies can be widely distributed to help match growers and buyers, and to educate residents and visitors about where local food comes from.

Action 3) Develop Public-Private Partnerships to Reach Institutional Markets

Watauga County Cooperative Extension can work with Appalachian Sustainable Agriculture Project, New River Organic Growers, and other organizations and neighboring counties to establish feasibility studies and multi-year pilot projects for farm-to-school, farm-to-hospital, and farm-to-university programs matching local farmers with institutional food buyers in the county and neighboring areas.

Farmers who organize and work together can work toward developing partnerships with institutions such as ASU to develop a rough processing center for washing and processing produce.

Action 4) Develop a Watauga Local Food Tourism Initiative

Watauga County Cooperative Extension and Watauga County District U Tourism Development Authority and the Boone Convention and Visitors Bureau can develop an initiative promoting Watauga County as a local foods destination within the High Country. With promotional materials and events, farm dinners and farm tours, on-farm Bed and Breakfasts, choose-and-cut Christmas tree experiences, local food restaurants, and media campaigns, Watauga can find mutual benefits strengthening its tourism and agriculture sectors through agritourism and mountain grown foods.

Action 5) Establish Contract Growing Arrangements between Farmers and Regional Food Pantries and Hunger Relief Agencies

Watauga County Cooperative Extension can serve as a facilitator for negotiating contracts between farmers and hunger relief providers, specifically for fresh produce to supplement the large amount of packaged foods. Regional foundations and individual donors can be called upon to help support this type of “plant a row for the hungry” initiative.

Action 6) Work with regional partners to promote and market high country Christmas trees both at the wholesale and choose-and-cut level.

DEMOGRAPHICS and SOCIAL FACTORS

Action 1) Assist Existing and Retiring Farmers in Preparing Transition Plans for their Farms

Watauga County Soil and Water and Watauga County Cooperative Extension can work with the North Carolina Farm Transition Network and other partners in pursuing grants to fund and host Farm Transition Planning workshops for farmers.

Provided that grants are available, funding can be pursued to cover some of the cost of individual farm planning and estate planning discussions held with farm families and their financial, legal, and tax advisors. Training local professionals as farm transition planning advisors is an important component of this Action.

Action 2) Promote Affordable Access to Land for Beginning Farmers

Watauga County Soil and Water and Watauga County Cooperative Extension can work with the North Carolina Farm Transition Network and other partners to fund and host Land Access workshops for new and beginning farmers. Workshops can include detailed discussion of creative financing options (including community investment or Slow Money strategies), land-link opportunities introducing retiring and new farmers, and discussion of equitable farm leases and community farm trusts.

Provided that grants are available, funding can be pursued to cover some of the cost of developing individual land access strategies for beginning farmers. Develop a farm mentoring program to match young farmers with retiring farmers and landowners to facilitate viable rental and land lease arrangements, particularly with landowners who own but do not actively graze or cultivate farmland.

Action 3) Promote Widespread Agricultural Education for Beginning Farmers and Existing Farmers Looking to Diversify their Farms

Watauga's and WNC's ample resources for agriculture education can be packaged, presented and marketed to attract and retain beginning farmers of all ages (college graduates to retirees) and assist existing farmers in developing new crops and strategies.

Cooperative Extension, ASU's Sustainable Development program, and other partners can work together to reach out to new and existing farmers and students with a yearly calendar of farming workshops, events, and trainings available in the High Country and Asheville area.

Watauga County and private donors can start an Agriculture Education Scholarship Fund to pay for a select number of students (such as FFA members and ASU students) and farmers to attend agriculture education events throughout the region.

Consider establishment of a farmer-incubator program or mentoring program such as the Breeze Farm in Orange County, NC.

INFRASTRUCTURE

Action 1) Develop Public-Private, Multi-County Local Foods Infrastructure

Watauga County can work with other counties in the High Country Council of Governments to develop shared processing and distribution infrastructure including:

- shared washing, prep, and packing facilities for produce
- commercial kitchens (smaller, more central than the former Ashe County facility)
- a multi-county slaughterhouse
- expanded distribution partnerships for local non-organic produce

Action 2) Develop Countywide Ordinances Allowing Promotion of Farms and Farm Products

Watauga County can amend its sign ordinance to ensure that farmers have the ability to fairly advertise their farms and farm products in a manner that complements the scenic qualities of the rural landscape and avoids the visual impacts of commercial advertising that sign ordinances are intended to prevent.

Action 3) Develop and seek funding for a local cost-share program to help with perimeter fencing costs for pasturelands. With pasture making up over 13,000 acres of open space, incentives to maintain this agricultural landscape clearly benefit the public; in particular the tourism industry. Fencing costs, especially on small plots, are often prohibitive for landowners and cattle producers.

Plan Implementation Matrix

The following matrix includes recommended actions for improving the viability of farming in Watauga County and the voluntary protection of farmland. The matrix lists the recommendation, current activities toward achieving the recommendation, partners who are or could be involved, and milestones and dates to advance the recommendation. In some cases, information must be gathered and provided to the Farmland Preservation Board, County Commissioners, and other decision-makers.

The following acronyms are used in the table:

ASU = Appalachian State University

ASAP = Appalachian Sustainable Agriculture Project

CE = Watauga County Cooperative Extension

COG = High Country Council of Governments

HHC = Hunger and Health Coalition

SW = Watauga County Soil and Water

Tourism = Watauga County Tourism Development Authority

WC = Watauga County



Winter squash at the farmers market

Action	Current Activities	Partners	Milestones	Dates
LAND				
1. Encourage state legislation for Small Farm Tax Relief	Present Use Value > 10 ac	WC, COG	Small farms amendment to state legislation	June 2011
2. Farmland Preservation	VFAD, easements	WC, SW, land trusts	Establish farmland fund	June 2011
3. Optimum Management	Technical assistance	SW, CE		
- IPM	" "	SW, CE	Train 10 farmers	Nov 2010
- Diversification	" "	SW, CE	Assist 10 farmers	Nov 2010
- Local beef	" "	SW, CE	Train 10 farmers	March 2011
- cost share/fencing	" "	SW, CE	Establish fencing program	March 2011
- renewable energy		SW, CE	Establish renewable energy program	Nov 2010
ECONOMICS/MARKETS				
1. ID and Meet Demand	ASAP studies	ASAP, CE		
- ID niche crops	Technical assistance	CE	Sauerkraut assessment	March 2010
- Branding/Buy Local	Appalachian Grown	CE, SW	Watauga Farm Fresh logo	Dec 2010
- Expand coops/NROG	Technical assistance	CE	Form conventional coop	June 2011
- CSA development	" "	CE	Promote 3 new CSA's	June 2011
- Farmers Market expansion	" "	CE	Find new site	Dec 2010
- Equipment Lending Library		SW	Purchase small combine	June 2011
2. Local Food Map	2010 version	SW	2011 update	Jan 2011
3. Institutional Markets	Outreach	WC, CE, ASAP	Pilot project at ASU	Jan 2011
4. Local Food Tourism	Various activities	WC, Tourism, CE	Launch initiative	March 2011
5. Hunger Relief contracts	Unofficial relationships	HHC, CE	Pilot project for contract	March 2011
DEMOGRAPHICS				
1. Farm Transition Plans	Unofficial	NCFTN, WC	Workshops for farmers	Jan 2011
2. Land Access	Unofficial	NCFTN, SW, CE	Land Link workshops	March 2011
- sample leases	Unofficial	NCFTN, LIC, SW	Prepare draft leases	March 2011
- community farm trust		NCFTN, LIC, SW	Assess feasibility	June 2011
3. Agriculture Education	Unofficial	CE, ASU	Present calendar, funds	January 2011
INFRASTRUCTURE				
1. Multi-county facilities	Discussion	SW, CE, ASAP	Slaughter house funding	June 2011
2. Farm signage ordinance	Discussion	WC, CE	Amend sign ordinance	January 2011
3. Fencing Cost Share	Discussion	WC, CE	Develop cost share option	June 2011

Action Implementation Matrix

CONCLUSIONS



Agriculture in Watauga County was diverse 100 years ago, became concentrated largely on cattle, Christmas trees, and tobacco in the later 20th century, and is now becoming more diverse than ever. This diversification and reaching local, regional, and statewide markets, combined with establishing the High Country as a food travel destination, are the keys to growing a strong, resilient agricultural economy in Watauga.

Tourism and academics (Appalachian State University) are the main economic drivers in Watauga County, both in terms of income and employment. New and existing farms, farmers, and local food businesses can benefit by embracing all opportunities to work with these sectors to establish the High Country as a destination for fresh, local foods.

Land ownership, land access, and land prices are major variables that will determine the ability of Watauga farmers to continue to expand the county's agricultural base, particularly with the rising average age of farmers. The declining number of farms and acres of farmland are interrelated trends that can be reversed by strategic planning for farm transition, creative land access and finance strategies for beginning farmers.

The Action Plan in this report is designed to offer the county and its residents and businesses with realistic steps to take for short-term and long-term implementation. Not all of the actions can be easily implemented – some will take strategic funding strategies and further development of community support. Specific steps for realizing the goals of a diverse, viable farm economy in Watauga can be achieved through new initiatives, public and private partnerships, and creative funding strategies. Residents, business owners, and elected officials in Watauga and other parts of Western North Carolina can work together to create a vibrant agricultural economy for the region.

Watauga can be, and is, truly Farming for the Future.

APPENDIX I

LIST OF MAPS

Soils of Prime and Statewide Importance

Township Farm Summary

Local Agricultural Infrastructure

Christmas Tree Farms

Potential Agriculture District Growth









Farm Segmentation

Township Agriculture Assessment Maps

- Beaver Dam
- Cove Creek
- Blue Ridge
- Elk
- Boone/New River
- Shawneehaw/Watauga (North)/Brushy Fork
- Laurel Creek
- Meat Camp
- Bald Mountain
- North Fork
- Stony Fork/Elk
- Blowing Rock/Watauga (South)

Watauga County: Agricultural Development & Farmland Preservation Plan

Soil Map - Prime Soils


















- Legend**
-  Township
 -  All areas are prime farmland
 -  Prime farmland if protected from flooding
 -  Farmland of statewide importance
 -  Farmland of local importance
 -  Conservation Lands 07/09
 -  Cons Tax Credit Props 7/09
 -  EEP CWMTE Esmt 07/09

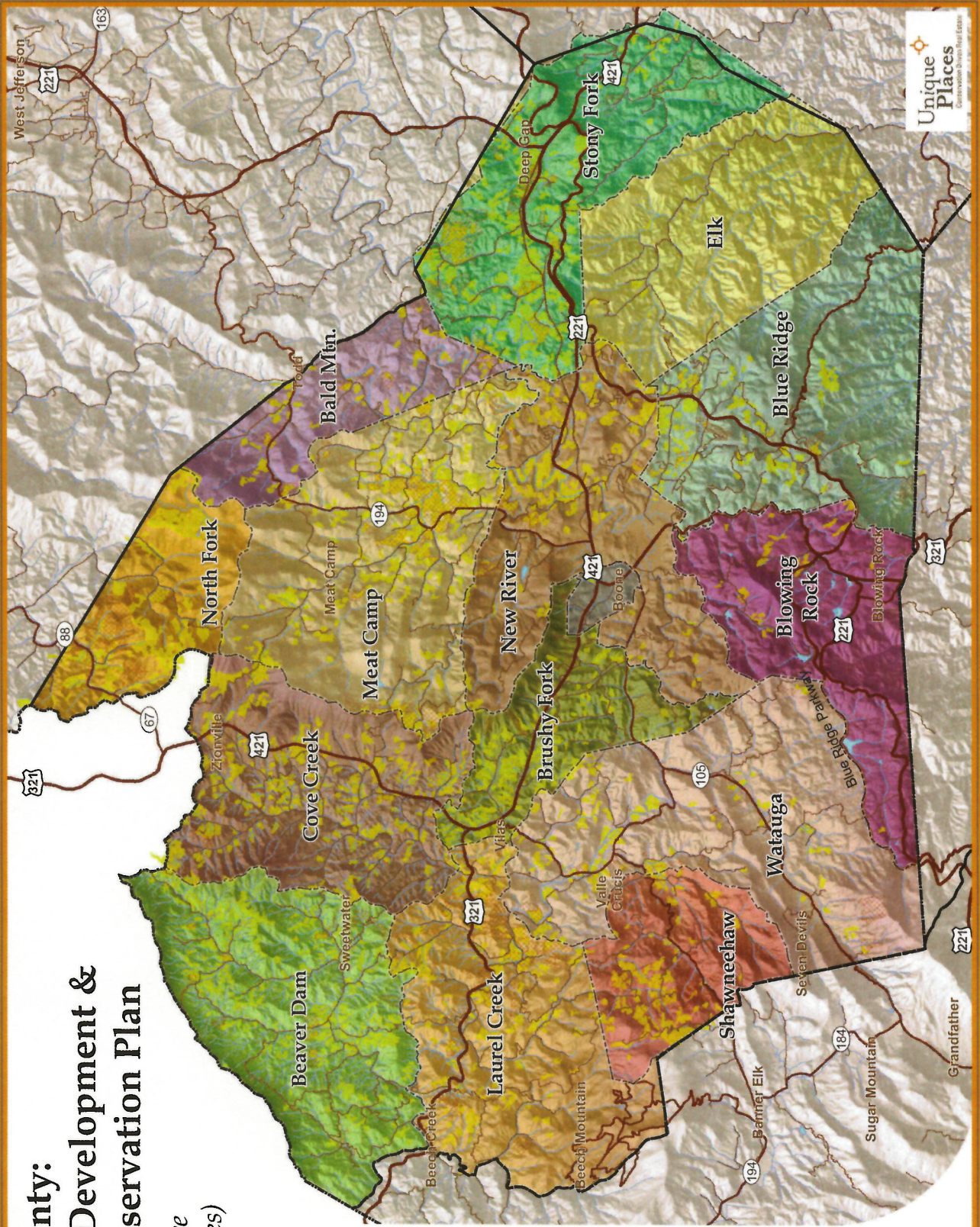


Watauga County: Agricultural Development & Farmland Preservation Plan

Existing Agriculture
Land Units (5+ acres)

Legend

-  Vol. Ag. District Parcels
-  USDA Agricultural Lands
- Township - Farm Acres**
-  Boone - 6 acres
-  Elk - 77 acres
-  Blowing Rock - 244 acres
-  Bald Min. - 629 acres
-  Blue Ridge - 890 acres
-  Shawnee - 1021 acres
-  Watauga - 1074 acres
-  Brushy Fork - 1138 acres
-  North Fork - 1537 acres
-  Laurel Creek - 1568 acres
-  New River - 1661 acres
-  Beaver Dam - 2194 acres
-  Stony Fork - 2640 acres
-  Meat Camp - 2770 acres
-  Cove Creek - 2799 acres



Agricultural Lands Assessment
NCDENR - 2006
Voluntary Ag. Districts
County - 11/2008

0 0.5 1 2 Miles

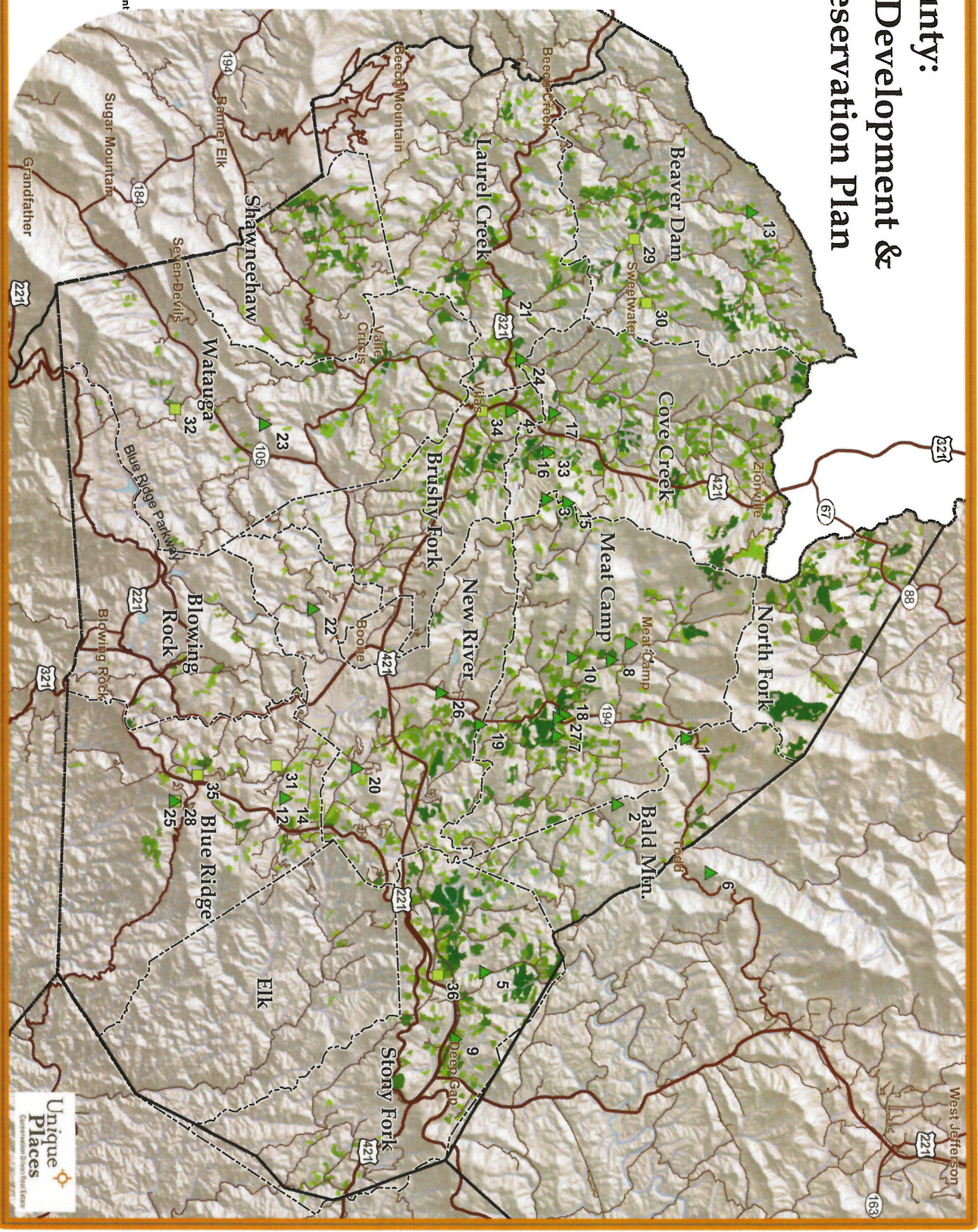
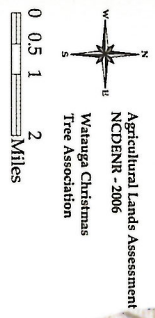
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Label	Name	Type	Label	Name	Type
1	E & E Organics	Farm	35	Manor House Restaurant Chetola	Local Food Restaurants
2	Watauga River Farms	Farm	36	Gamekeeper Restaurant	Local Food Restaurants
3	Meadow Creek Farm	Farm	37	Melanie's Food Fantasy	Local Food Restaurants
4	Twin Willows Farm	Farm	38	Reid's Catering	Local Food Caterers
5	Willett Ponds Farm	Farm and Agritourism	39	Earth Fare	Local Food Grocers
6	The Homestead at Timber Lakes	Farm	40	Mustard Seed Market	Local Food Grocers
7	Poppy's Knob Farm	Farm	41	Stockyard Bucking Co	Farm Supply
8	Hinkley Family Farm	Farm	42	High Country CSA	Local Food Distributors
9	Grandfather Mountain Apple Orchard	Orchard	43	Critchler Brothers Produce	Local Food Restaurants
10	Yokel Foods Farm	Farm	44	Blue Ridge Bones	Local Food Restaurants
11	Woodland Harvest Mountain Farm	Permaculture Farm	45	Watauga County Christmas Tree	Local Agriculture Organizations
12	The Farm at Mollies Branch	Farm	46	Watauga Cattlemen's Associatio	Local Agriculture Organizations
13	Springhouse Farm	Farm	47	New River Organic Growers	Local Food Distributors
14	Smitty's Farm	Farm	48	Blue Ridge Women in Agricultur	Local Agriculture Organizations
15	Shady Grove Gardens and Nurser	Nursery	49	Pasta Wench	Local Processed Foods
16	Raven Rocks Farm	Farm	50	Blowing Rock Honey	Local Processed Foods
17	Petit Pois Farm	Microfarm	51	Tomato Shack Country Store	Local Processed Foods
18	North Fork Farm	Farm	52	Tomato Shack Country Store	Local Processed Foods
19	Mountain Works Farms	Farm and CSA	53	Mast General Store	Local Processed Foods
20	Moretz's Mountain Orchard	Orchard	54	Mast General Store	Local Processed Foods
21	Foglikely Farm	Farm	55	Todd General Store	Local Food Grocers
22	Fire from the Mountain	Farm	56	The Mast Farm Inn	Local Food Restaurants
23	Creeksong Farms	Farm	57	Mast General Store	Local Processed Foods
24	Maverick Farm	Farm, CSA and Agritourism	58	Bistro Roca	Local Food Restaurants
25	Coffey's Orchard	Orchard	59	Storie Street Grille	Local Food Restaurants
26	Chestnut Grove Farms	Farm	60	Rowlands Restaurant	Local Food Restaurants
27	Mays Meat Processing	Slaughterhouses	61	Crippen's Country Inn & Restau	Local Food Restaurants
28	Tri-State Livestock Market	Livestock Auctions	62	Watauga County Farmers' Market	Farmers Markets
29	Kingsport Live Auction	Livestock Auctions	63	Boone Meat Center	Butchers
30	Southern States Co-Op	Farm Supply	64	Bare Essentials Natural Market	Local Food Grocers
31	Southern Agricultural	Farm Supply	65	Hollar & Greene Produce Co	Local Food Distributors
32	David G. Miller Farm Supply	Farm Supply	66	Ingles Market #84	Local Food Grocers
33	Crave	Local Food Restaurants	67	Jim's Produce	Local Food Grocers
34	Char Restaurant	Local Food Restaurants	68	Thomas Brothers' Meat Processi	Slaughterhouses

Watauga County: Agricultural Development & Farmland Preservation Plan

Local Christmas Tree Farms

- Legend**
- Choose and Cut Farm
 - Wholesale Farm
- Farm Size (by Parcel)**
- 1 - 10 acres
 - 10 - 25 acres
 - 25 - 50 acres
 - 50 - 350 acres




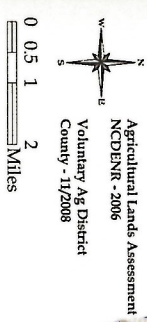
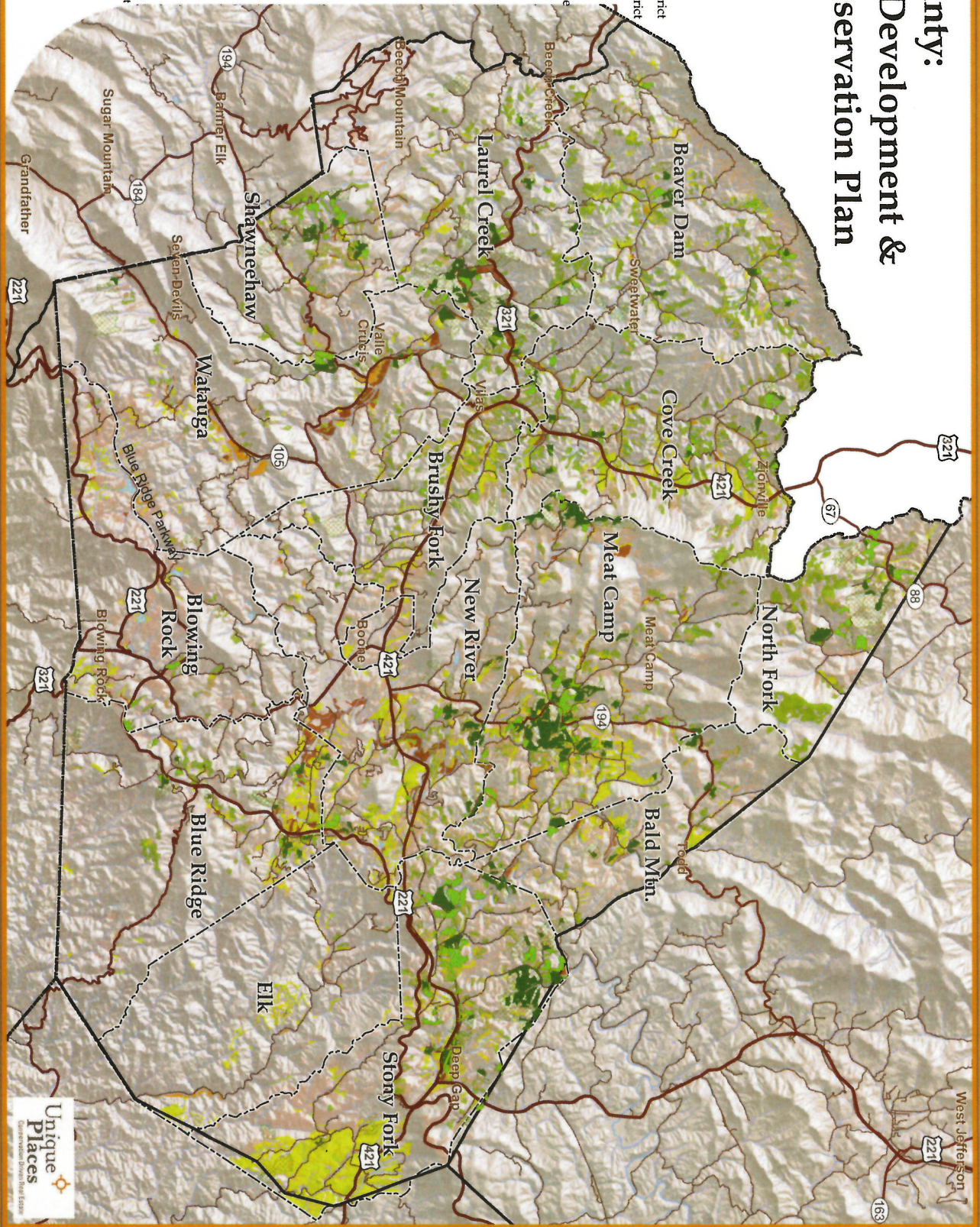
Name	Label
8058 Nc Highway 194N, Todd	1
RRR Todd Farm	2
Nathaniel and Kirby Maram Farm	3
Tom Lawrence Farm	4
Swinging Bridge Farm	5
RRR Laurel Knob Christmas Tree	6
Panoramic Choose and Cut	7
Norris Tree Farm	8
My Two Girls Tree Farm	9
Miller Tree Farm	10
J & D Tree Farms	11
High Country Nursery	12
Cornett Deal Christmas Tree Fa	13
524 Harrison Rd, Boone, NC 286	14
Greene Family Tree Farm	15
Ewings Fraser Fir Farm	16
Cross Ridge Christmas Tree Far	17
Clawson's Choose and Cut	18

Name	Label
Brown's Choose and Cut	19
Circle C Farms	20
Bluestone Greenery	21
Bill and Peggy Austin Choose a	22
Big Ridge Tree Farm	23
Bear Wallow at Long Ridge Farm	24
620 Sampson Rd, Boone	25
Appalachian Evergreens	26
C & J Christmas Trees	27
Appalachian Evergreens	28
Bethel Valley Nursery	29
Cornett's Carolina Fraser Fir	30
Highlands Tree Farm	31
Hawk Mountain Tree Farm	32
Ewings Fraser Fir Farm	33
Stone Mountain Farms	34
Yates Christmas Trees	35
DJ Trees	36

Watauga County: Agricultural Development & Farmland Preservation Plan

Potential Agriculture District Growth Legend

-  Vol. Ag. District Parcels
-  Farm Units in Voluntary Ag. District
-  Farm Units - Adjacent to Ag. District
-  All areas are prime farmland
-  Prime if protected from flood
-  Farmland of statewide importance
-  Farmland of local importance
-  Farm Units

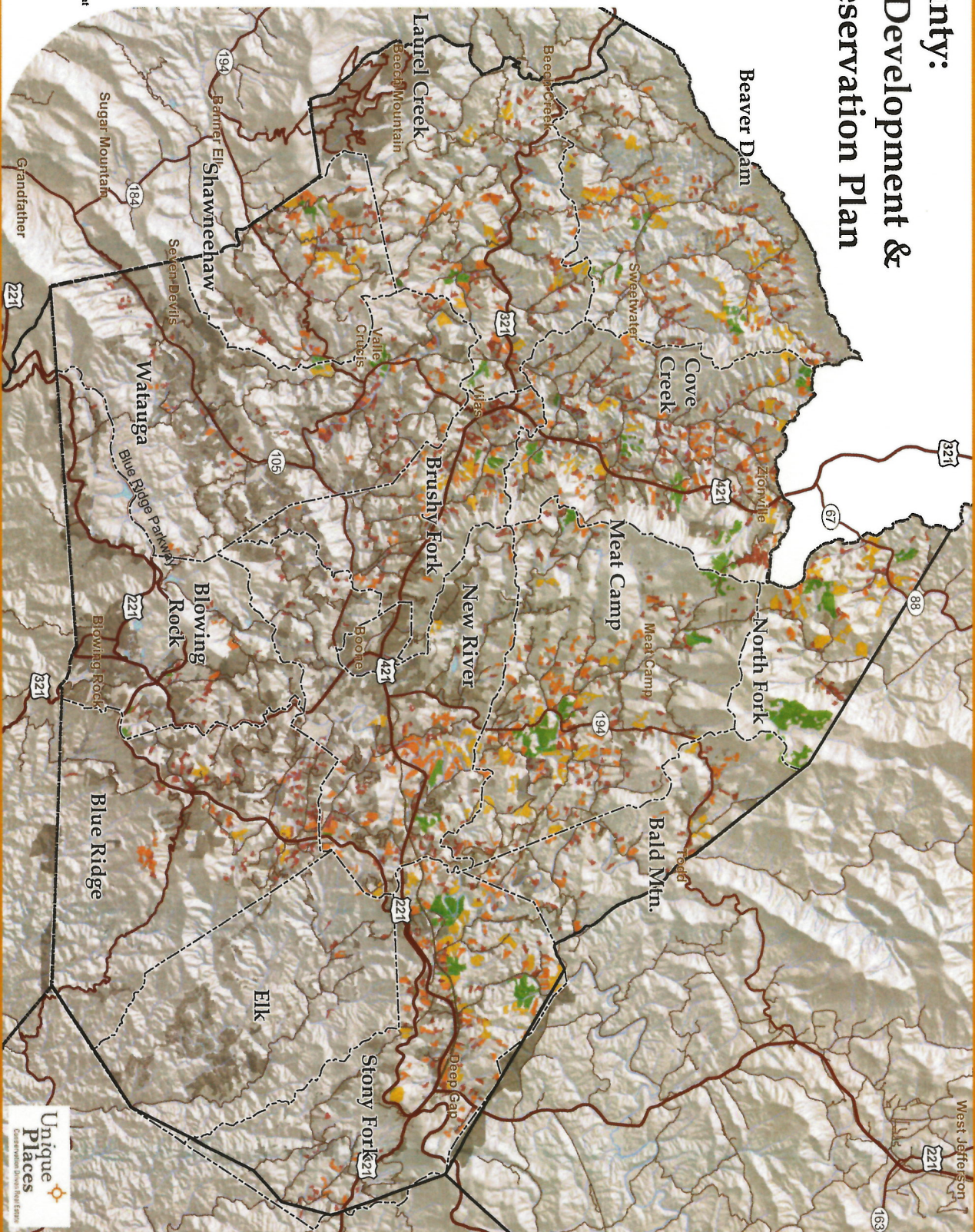
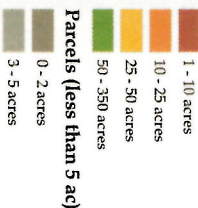


Watauga County: Agricultural Development & Farmland Preservation Plan

Farm Segmentation

Legend

Farm Size (by Parcel)



Agricultural Lands Assessment
NCDENR - 2006

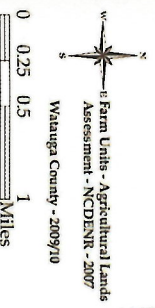
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Miles

Watauga County: Agricultural Development & Farmland Preservation Plan

Beaverdam Township

Legend










- Food Producing Farms
 - Local Food Infrastructure
 - Choose and Cut Christmas Trees
 - Wholesale Christmas Trees
 - Voluntary Ag. Parcel
- Farm Size (by Parcel)**
- 1 - 10 acres
 - 10 - 25 acres
 - 25 - 50 acres
 - 50 - 350 acres

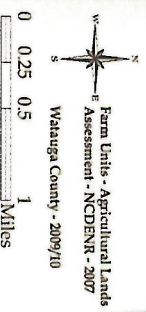


Watauga County: Agricultural Development & Farmland Preservation Plan

Cove Creek Township

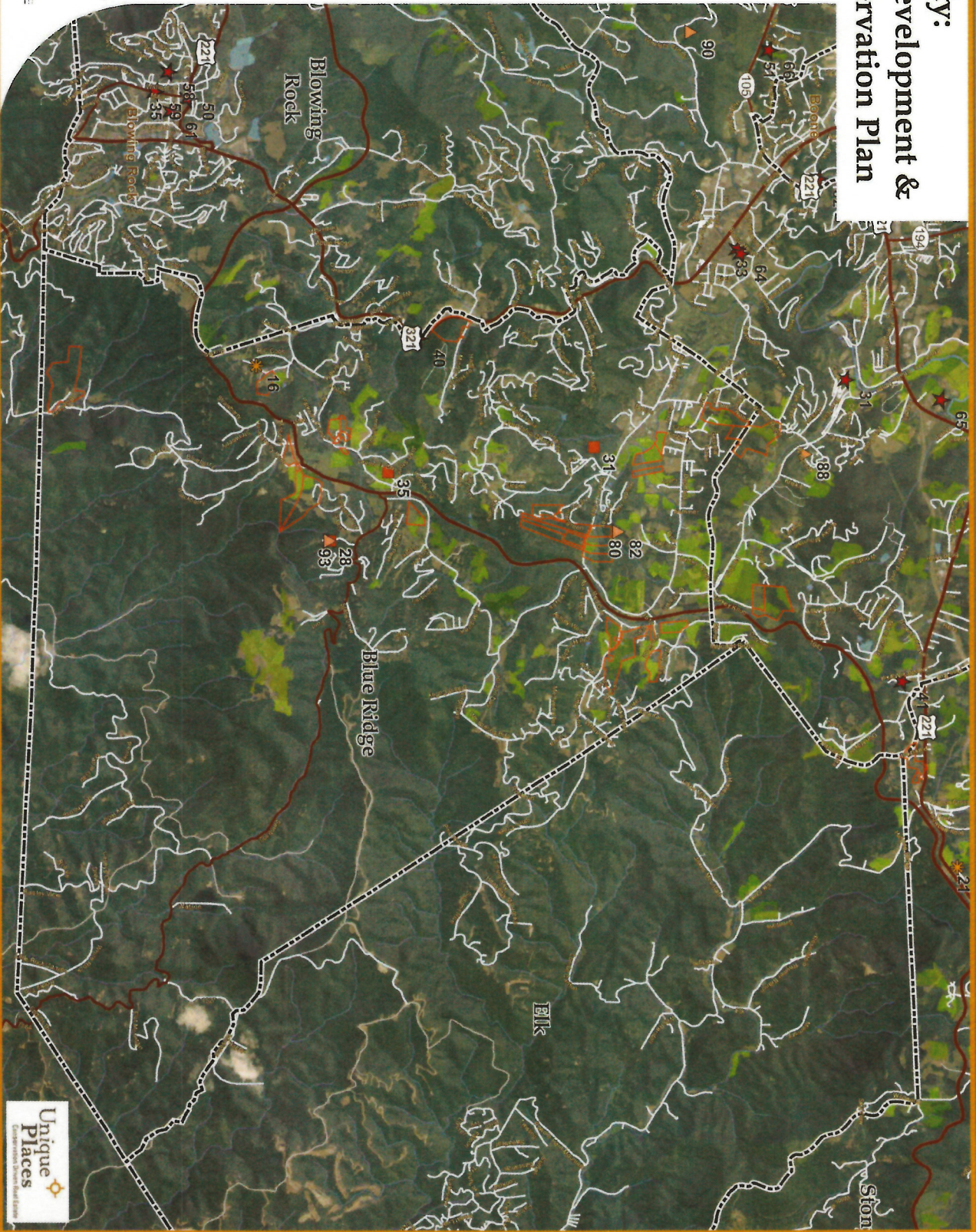
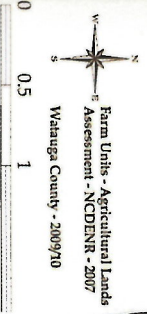
Legend

-  Food Producing Farms
-  Local Food Infrastructure
-  Choose and Cut Christmas Trees
-  Wholesale Christmas Trees
-  Voluntary Ag. Parcel
- Farm Size (by Parcel)**
 -  1 - 10 acres
 -  10 - 25 acres
 -  25 - 50 acres
 -  50 - 350 acres



Watauga County: Agricultural Development & Farmland Preservation Plan Blue Ridge/ Elk Townships






- Legend**
- Food Producing Farms
 - Local Food Infrastructure
 - Choose and Cut Christmas Trees
 - Wholesale Christmas Trees
 - Voluntary Ag. Parcel
 - Farm Size (by Parcel)**
 - 1 - 10 acres
 - 10 - 25 acres
 - 25 - 50 acres
 - 50 - 350 acres



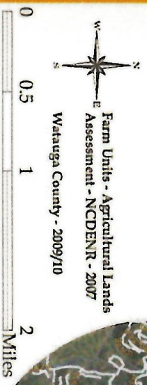
Watauga County: Agricultural Development & Farmland Preservation Plan

Boone/
New River
Township

Legend

-  Food Producing Farms
-  Local Food Infrastructure
-  Choose and Cut Christmas Trees
-  Wholesale Christmas Trees
-  Voluntary Ag. Parcel
-  Farm Size (by Parcel)

- 1 - 10 acres
- 10 - 25 acres
- 25 - 50 acres
- 50 - 350 acres



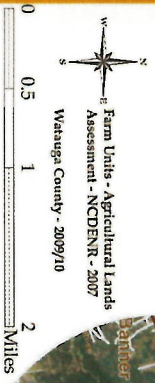
Farm Units - Agricultural Lands
Assessment - NCDENR - 2007
Watauga County - 2009/10



Watauga County: Agricultural Development & Farmland Preservation Plan

Shawnee/ary/
Watauga (North)/
Brushy Fork
Townships










- Legend**
- Food Producing Farms
 - Local Food Infrastructure
 - Chooose and Cut Christmas Trees
 - Wholesale Christmas Trees
 - Voluntary Ag. Parcel
 - Farm Size (by Parcel)
 - 1 - 10 acres
 - 10 - 25 acres
 - 25 - 30 acres
 - 50 - 350 acres

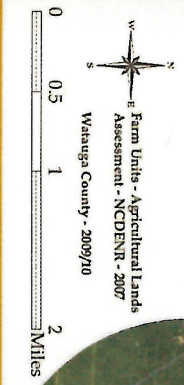


Watauga County: Agricultural Development & Farmland Preservation Plan

Laurel Creek Township

Legend

-  Food Producing Farms
-  Local Food Infrastructure
-  Choose and Cut Christmas Trees
-  Wholesale Christmas Trees
-  Voluntary Ag. Parcel
- Farm Size (by Parcel)**
 -  1 - 10 acres
 -  10 - 25 acres
 -  25 - 50 acres
 -  50 - 350 acres

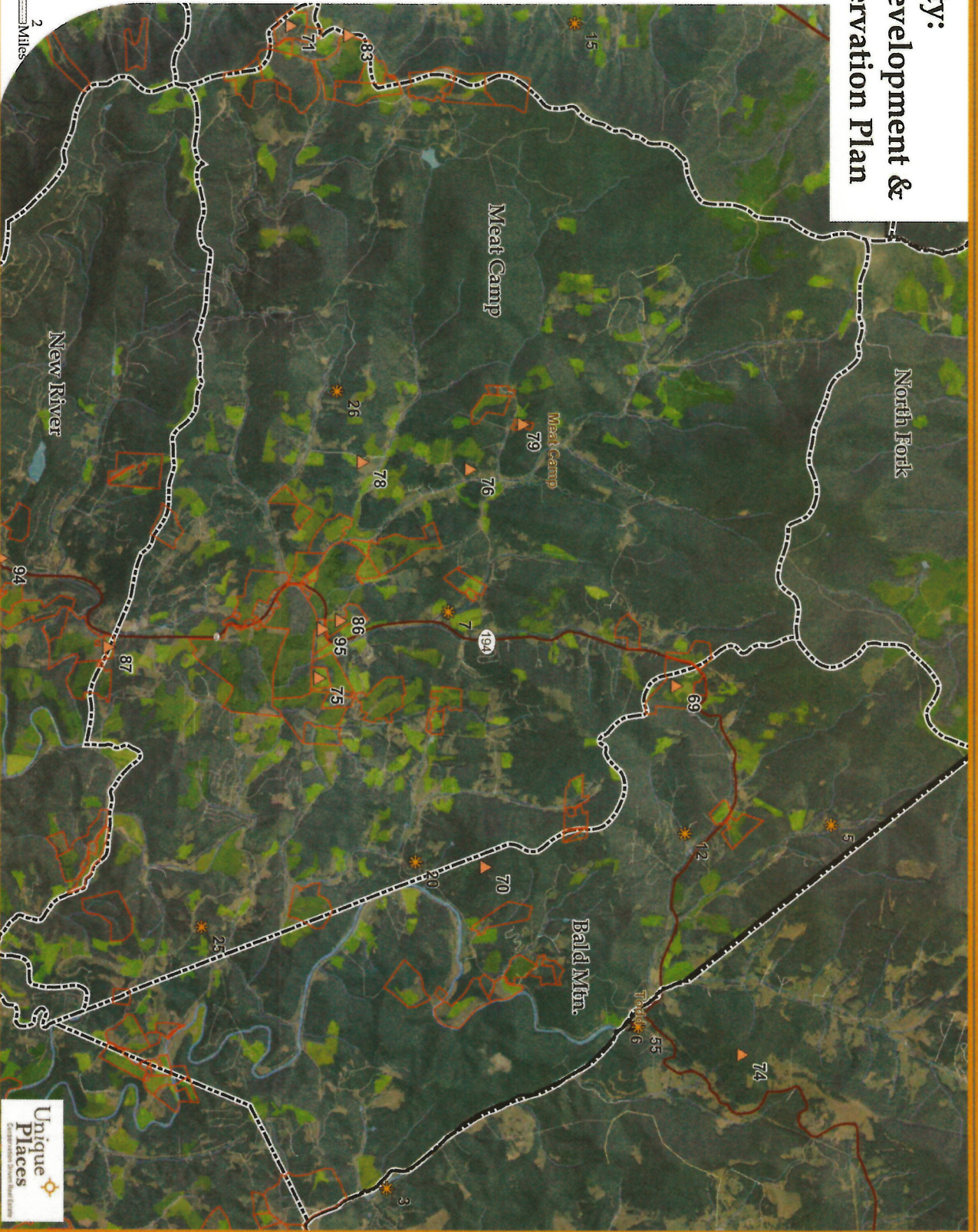
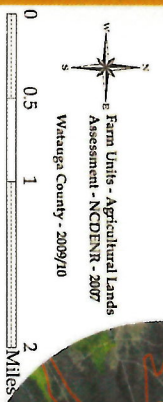


Watauga County: Agricultural Development & Farmland Preservation Plan

Bald Mtn. &
Meat Camp
Townships

Legend











- Food Producing Farms
- Local Food Infrastructure
- Choose and Cut Christmas Trees
- Wholesale Christmas Trees
- Voluntary Ag. Parcel
- Farm Size (by Parcel)**
 - 1 - 10 acres
 - 10 - 25 acres
 - 25 - 50 acres
 - 50 - 350 acres

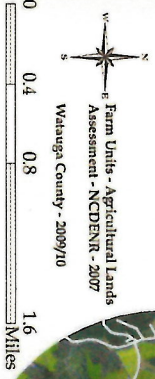


Watauga County: Agricultural Development & Farmland Preservation Plan

North Fork Township

Legend







-  Food Producing Farms
-  Local Food Infrastructure
-  Choose and Cut Christmas Trees
-  Wholesale Christmas Trees
-  Voluntary Ag. Parcel
-  Farm Size (by Parcel)
-  1 - 10 acres
-  10 - 25 acres
-  25 - 50 acres
-  50 - 350 acres

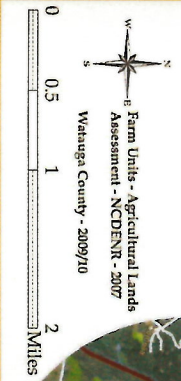


Watauga County: Agricultural Development & Farmland Preservation Plan

Stony Fork / Elk Townships

Legend










-  Food Producing Farms
-  Local Food Infrastructure
-  Choose and Cut Christmas Trees
-  Wholesale Christmas Trees
-  Voluntary Ag. Parcel
-  Farm Size (by Parcel)
 - 1 - 10 acres
 - 10 - 25 acres
 - 25 - 50 acres
 - 50 - 350 acres

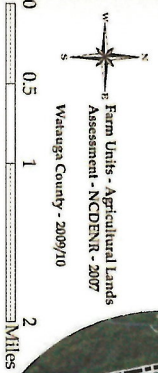


Watauga County: Agricultural Development & Farmland Preservation Plan

Blowing Rock/
Watauga (South)
Townships

Legend

-  Food Producing Farms
-  Local Food Infrastructure
-  Choose and Cut Christmas Trees
-  Wholesale Christmas Trees
-  Voluntary Ag. Parcel
- Farm Size (by Parcel)**
 -  1 - 10 acres
 -  10 - 25 acres
 -  25 - 50 acres
 -  50 - 350 acres



APPENDIX II
EXECUTIVE SUMMARY

Challenges and Actions (As Identified by Watauga residents and Project Partners)

CHALLENGES

LAND

- High land prices/taxes keeping young farmers from starting farms
- Mountain farms smaller others in NC
- Losing farmland to development
- Farmers' land is often their only wealth

ECONOMIC/MARKET

- Relatively low profits and limited markets for farm products
- Health insurance is expensive
- Difficult to match producers & consumers
- Reaching institutional food buyers

DEMOGRAPHIC

- Aging farm population and absentee landowners
- Farm labor can be hard to find
- Not enough of the next generation going into farming

INFRASTRUCTURE

- Limited options for storage, processing, distribution
- Ordinances allowing farm signs needed

ACTIONS

LAND

- Tax relief for small farms (< 10 ac)
- Farmland Preservation Funding
- Technical and cost-share assistance for optimizing farm management (local beef, fencing, diversify crops, renewable energy)

ECONOMIC/MARKET

- Identify/meet market demand: niche crops; Buy Local branding; distribution co-ops; expand farmers markets CSA's;
- Distribute annual Watauga Local Food Map
- High Country local food tourism initiative
- Develop institutional markets
- Contract growing for food banks/pantries
- Community-based financing (Slow Money)
- Watauga sauerkraut/fermented foods

DEMOGRAPHIC

- Farm transition plans for retiring farmers
- Land access strategies for new farmers (equitable leases, community farm trust)
- Expanded access to agriculture education, incubator farms

INFRASTRUCTURE

- Multi-county processing/storage/distribution facilities needed
- Commercial kitchens, sign ordinances to advertise local farms



Watauga County Agricultural Development and Farmland Protection Plan

Executive Summary Shipping a Vision for a Vibrant Agricultural Economy

In 2009 – 2010, Watauga County coordinated a Community Visioning process to assess the current state of farming in the county and to begin shaping a shared vision for a viable and vibrant agricultural future. Through a series of public meetings, farmer interviews, and township agricultural surveys, residents, landowners, farmers, business owners, and local supporters of agriculture shared their concerns and recommendations for Watauga's farm economy and rural way of life. That yearlong process forms the basis of the *Watauga County Agricultural Development and Farmland Preservation Plan* summarized in this handout. The county received a grant from the North Carolina Agricultural Development and Farmland Preservation Trust Fund to develop the Plan in conjunction with Unique Places. The Plan is now available as a guiding document for Watauga to use in making informed decisions and developing financing strategies to secure its place as a mountain farming community.

WATAUGA IS:

- > Losing farmland and farmers
- > Growing an economy increasingly based on tourism and development
- > Experiencing strong growth in demand for local foods and diversifying its farm base
- > An expensive area for many beginning farmers to purchase land
- > An area where many farmers count on their land as a major asset for retirement

LOCAL FARMS AND FOOD INFRASTRUCTURE MAP

This map offers an initial snapshot of Watauga's local food and farming economy as of 2010. It should be considered a "living map" that the community can update regularly to reflect changes and expansion of the county's food producing farms and businesses, food processing facilities, food distributors, and various markets. It is intended to offer all residents a clear understanding of where their local food comes from and who are the growers, processors, and distributors that keep the farm economy strong. Cattle farms are shown as pasture and hayfields in green and yellow shades as mapped by the USDA and aerial photography. The largest contiguous blocks of farmland are shown in dark green, with the smallest shown in light green, based on USDA-Farm Security Agency calculations (www.conencnaturally.org).

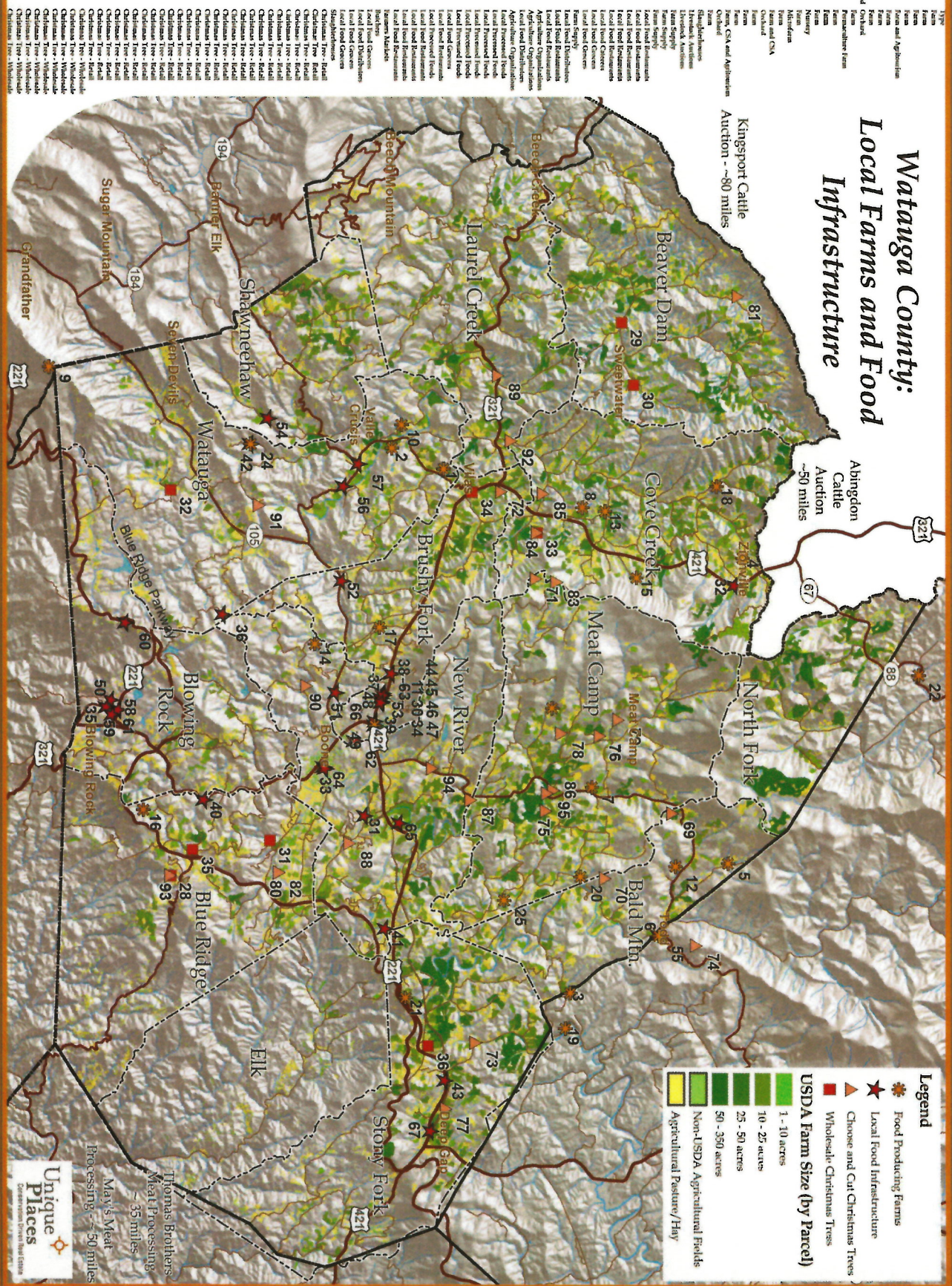
Watauga County is at an important crossroads – can the county grow as a High Country mountain retreat destination while retaining its community-based agricultural economy? With the community-based Actions recommended in the *Watauga County Agricultural Development and Farmland Preservation Plan* residents, farmers, business owners, and elected officials in Watauga and other parts of Western North Carolina can work together to create a vibrant agricultural economy for the region.

Prepared for the Watauga County Soil and Water Conservation District by Unique Places, with a grant from the North Carolina Agricultural Development and Farmland Preservation Trust Fund.



For more information, contact Brian Chatham, Watauga County Soil and Water
Phone: 828.264.0842 Email: Brian.Chatham@wagov.org

Watauga County: Local Farms and Food Infrastructure



1	E.A. Capella	Farm
2	Watauga River Farm	Farm
3	Watauga Creek Farm	Farm
4	Watauga River Farm	Farm
5	Watauga River Farm	Farm
6	The Hometown at Timber Lake	Farm
7	Happy's Food Farm	Farm
8	Watauga River Farm	Farm
9	Watauga River Farm	Farm
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120	Watauga River Farm	Farm

Unique Places
Downtown Douthett Ridge Farm

APPENDIX III
WATAUGA COUNTY FARMLAND PRESERVATION ORDINANCE

WATAUGA COUNTY
VOLUNTARY FARMLAND PRESERVATION
PROGRAM ORDINANCE

ARTICLE I
TITLE

This program, adopted by the Board of Commissioners of Watauga County, North Carolina, shall be known as the **Watauga County Voluntary Farmland Preservation Program Ordinance**.

ARTICLE II
AUTHORITY

The articles and sections of this program ordinance are adopted pursuant to the authority conferred by N.C. General Statutes 106-735 through 106-743.

ARTICLE III
PURPOSE

The purpose of this program ordinance is to promote the health, safety, rural agricultural values, and general welfare of the county, and more specifically, increase identity and pride in the agricultural community and its way of life; encourage the economic and financial health of farming; increase protection from undesirable, non-farm development; and increase the protection of farms from nuisance suits and other negative impacts on properly managed farms.

ARTICLE IV
JURISDICTION

The jurisdiction of the Watauga County Voluntary Farmland Preservation Program Ordinance shall be the unincorporated areas of Watauga County.

ARTICLE V
DEFINITIONS

Advisory Board: The Watauga County Agricultural Advisory Board

Board of Commissioners: The Board of Commissioners of Watauga County, North Carolina

Chairman: Chairman of the Watauga County Agricultural Advisory Board

District: A voluntary agricultural district established under the terms and conditions of this program by the Board of Commissioners

ARTICLE VI
QUALIFICATIONS AND CERTIFICATION OF FARMLAND

Section 600. Requirements

In order for farmland to qualify for participation under the terms of this program, it shall meet the following requirements:

- (1) The farmland shall be real property;
- (2) The farm property shall be participating in the farm present-use-value taxation program established by G.S. 105-277.2 through 105-277.7, or is otherwise determined by the county to meet all the qualifications of this program set forth in G.S. 105-277.3;
- (3) The property shall be certified by the Natural Resources Conservation Service of the United States Department of Agriculture, in consultation with the Cooperative Extension office and the Farm Service Agency, as being a farm on which at least two-thirds of the land is composed of soils that:
 - (a) are best suited for providing food, seed, fiber, forage, timber, and horticultural crops, including Christmas trees and ornamentals;
 - (b) have good soil qualities;
 - (c) are favorable for all major crops common to the county where the land is located;
 - (d) have a favorable growing season; and
 - (e) receive the available moisture needed to produce high yields for an average of eight out of ten years; or

Soils on which at least two-thirds of the land has been actively used in agricultural, horticultural or forestry operations as defined in G.S. 105-277.2 (1, 2, 3) during each of the five previous years, measured from the date on which the determination must be made as to whether the land in question qualifies;

- (4) The property, if highly erodible land exists on the farm, is managed in accordance with the Natural Resources Conservation Service defined erosion control practices that are addressed to said highly erodible land; and

- (5) The property is the subject of a conservation agreement, as defined in G.S. 121-35, between the county and the owner of such land that prohibits non-farm use or development of such land for a period of at least ten years, except for the creation of not more than three lots that meet applicable county watershed and subdivision regulations, or the regulations of any municipality which apply to the farm property. The property owner may voluntarily revoke this conservation agreement by submitting a written request to the board in accordance with Article VIII.

Section 601. Certification

The owner of the farm seeking to qualify his property for participation in the farmland preservation program ordinance shall submit written evidence that the property conforms with the requirements of Section 600 of this program. This written information shall be submitted to the Chairman of the Advisory Board or the designated staff person on forms provided by the board. The certification may be submitted at the same time the owner applies for inclusion in a district.

ARTICLE VII APPLICATION, APPROVAL AND APPEAL PROCEDURES FOR VOLUNTARY AGRICULTURAL DISTRICTS

Section 700. Creation of Voluntary Agricultural Districts

In order to implement the purposes stated in Article III, this program provides for the creation of voluntary agricultural districts which shall meet the following standards:

- (1) The district, when initially established, shall contain a minimum of 25 contiguous acres of qualified farmland, OR, two or more qualified farms which contain a minimum of 25 acres and are located within a mile of each other;
- (2) The landowner(s) requesting inclusion in the district shall execute an agreement with the county to sustain agriculture in the district in accordance with Section 600 (5) of this program. Said agreement shall be in a form which is reviewed and approved by the advisory board; and
- (3) For each district created under the terms of this program, one of the existing advisory board members shall be assigned to represent the district.

Section 701. Application to Participate

A landowner may apply to participate in the program by making application to the chairman of the advisory board or to a designated staff person. The application shall be on forms provided by the advisory board. The application to participate in a district may be filed with the certification of qualifying farmland.

Section 702. Approval Process

Upon review by the staff of the written certification and application submitted by the property owner, the board shall meet within 30 days if possible to approve or disapprove the application. The chairman shall notify the applicants by first class mail of said approval or disapproval of participation in the district.

Section 703. Appeal

If an application is denied by the Agricultural Advisory Board, the petitioner has 30 days to appeal the decision to the Watauga County Board of Commissioners. Such appeal shall be presented in writing. The decision of the Board of Commissioners is final.

ARTICLE VIII

REVOCATION AND RENEWAL OF CONSERVATION AGREEMENTS

REVOCATION

By written notice to the board, a landowner of qualifying farmland may revoke the preservation agreement formulated pursuant to Section 600 (5) of this program, or the board may revoke same preservation agreement based on noncompliance by the landowner. Such revocation shall result in loss of qualifying farm status, and consequently, loss of eligibility to participate in a voluntary agricultural district and the benefits thereof. Revocation by a landowner of a preservation agreement and the resulting loss of qualifying farmland status for the purpose of participation in a voluntary agricultural district shall in no way affect the eligibility of the land to be taxed at its present use value as provided in N.C.G.S. 105-277.2 through N.C.G.S. 105-277.6. If a portion of a district is removed for any reason after being established by this program, the remaining qualified farms may remain in the program, provided they meet all other requirements except the minimum area requirements of Section 700 (1).

RENEWAL

Conservation Agreements shall be deemed automatically renewed for an additional term of 10 years, unless either the Advisory Board or the landowner gives written notice to the contrary no later than 30 days prior to the termination date.

The action above does not prevent anyone who is enrolled from withdrawing at a later date by written notice.

ARTICLE IX
AGRICULTURAL ADVISORY BOARD

Section 900. Creation

In accordance with N.C.G.S. 106-739, the Board of Commissioners hereby establishes an Agricultural Advisory Board to implement the provisions of this program ordinance.

Section 901. Appointments and Membership

The Agricultural Advisory Board shall consist of five members appointed by the Watauga County Board of Commissioners.

(1) Requirements

- (a) Each board member shall be a county resident and registered to vote in Watauga County.
- (b) Four of the five members shall be actively engaged in farming.
- (c) The four members actively engaged in farming shall be selected for appointment by the Board of Commissioners from the names of individuals submitted to the Board of Commissioners by the Watauga Soil and Water Conservation District, the Cooperative Extension Service, the Farm Service Agency Committee and the Watauga County Farm Bureau, with an effort to have the broadest geographical representation possible. The fifth member shall have special interest, experience, or education in agriculture and/or rural land preservation.

- (2) Tenure. The members are to serve for terms of three years, except that the initial board is to consist of two appointee(s) for a term of one year, two appointees for terms of two years, and one appointee for a term of three years. Thereafter, all appointments are to be for terms of three years, with reappointments permitted. The terms for the initial board members will be determined by lottery.

- (3) Vacancies. Any vacancy on the Agricultural Advisory Board is to be filled by the Board of Commissioners for the remainder of the unexpired term following the same procedure as for the initial appointment.

- (4) Removal for Cause. Any member of the Agricultural Advisory Board may be removed for cause by the Board of Commissioners upon written charges and after a public hearing.

(5) Funding

- (a) *Compensation.* The per meeting compensation of the members of the board shall be fixed by the Board of Commissioners.
- (b) *Appropriations for performance of duties.* Funds shall be appropriated by the Board of Commissioners to the Agricultural Advisory Board to perform its duties. A budget request will be presented to the County Commissioners annually.

Section 902. Procedures

The Board shall adopt rules of procedure which are consistent with the enabling legislation and other applicable statutes.

- (1) Chairperson. The board shall elect a chairperson and vice-chairperson each year at its first meeting of the fiscal year. The chairperson shall preside over all regular or special meetings of the board. In the absence or disability of the chairperson, the vice-chairperson shall preside and shall have and exercise all the powers of the chairperson so absent or disabled. Additional officers may be elected as needed.
- (2) Jurisdiction and Procedures; Supplementary Rules. The jurisdiction and procedures of the board are set out in this article, except that the board may adopt supplementary rules of procedure not inconsistent with this article or with other provisions of law.
- (3) Board Year. The board shall use the county fiscal year as its meeting year.
- (4) Meetings. Meetings of the board, following such notice as required by this article, shall be held at the call of the chairperson and at such other times as the board in its rules of procedure may specify. A called meeting shall be held at least quarterly. A quorum shall consist of a majority of the members of the board.
- (5) Voting. The concurring vote of a majority of the members of the board shall be necessary to reverse any order, requirement, decision or determination of any administrative official or agency, to decide in favor of an applicant, or to pass upon any other matter on which it is required to act under this article.
- (6) Records. The board shall keep minutes of the proceedings showing the vote of each member upon each question, or if absent or failing to vote, indicating such fact, and shall keep records of its examinations and other official actions, all of which shall be immediately filed in the office of the board and shall be a public record.

- (7) Administrative Services. The Soil and Water Conservation District office shall serve the agricultural advisory board for recordkeeping, correspondence, application procedures under this article together with such other services the board needs to complete its duties.

Section 903. Duties

The Agricultural Advisory Board shall:

- (1) Review and approve applications for qualified farmland and voluntary agricultural districts.
- (2) Hold public hearings pursuant to Article X of this program.
- (3) Advise the Board of Commissioners on projects, programs, or issues affecting the agricultural economy or activities within the county and that will affect agricultural districts.
- (4) Perform other related tasks or duties assigned by the Board of Commissioners.

ARTICLE X PUBLIC HEARINGS ON CONDEMNATION OF FARMLAND

Section 1000. Purpose

Pursuant to N.C.G.S. 106-740, no state or local public agency or governmental unit may formally initiate any action to condemn any interest in qualifying farmland within a voluntary agricultural district until such agency or unit has requested the Agricultural Advisory Board to hold a public hearing on the proposed condemnation. The procedures for such hearings shall be as set forth below.

Section 1001. Procedures

- (1) Establish Public Hearing. Upon receipt of a request for a public hearing, the Agricultural Advisory Board shall have 30 days to set a date for a public hearing on the proposed condemnation pursuant to N.C.G.S. 106-740. No formal initiation of condemnation shall be initiated while the proposed condemnation is properly before the board within the time limitations set forth in this section.
- (2) Notice of Public Hearing. The board shall run a notice of the public hearing in a newspaper having general circulation in Watauga County at least 10 days prior to the date established for the hearing. The notice shall contain the date, time and place of the hearing and shall provide the name of the agency requesting the hearing and the purpose of the condemnation.

(3) Public Hearing. The board shall conduct the public hearing and receive information and comments from the agency requesting the condemnation action and the citizens of Watauga County. Additionally, the board shall review the following:

- (a) Has the need for the project requiring the condemnation been satisfactorily shown by the agency requesting the action?
- (b) Has a financial impact analysis been conducted by the agency seeking the action?
- (c) Have alternatives been considered to the proposed action that are less disruptive to the agricultural activities and farmland base of the voluntary agricultural district within which the proposed action is to take place?

The board shall invite and allow input by the county Cooperative Extension agent, U.S.D.A. Natural Resources Conservationist, the Farm Service Agency, and may consult with any other individuals, agencies or organizations, public or private, necessary to the board's review of the proposed action.

(4) Findings and Notification. Within 10 days after the public hearing, the board shall make a report containing its findings and recommendations regarding the proposed action. The report shall be conveyed to the decision-making body of the agency proposing acquisition and made available to the public for comment.

ARTICLE XI LAND USE INCENTIVES TO VOLUNTARY AGRICULTURAL DISTRICT FORMATION

Section 1100. Purpose

The purpose of this section is to help meet the needs of agriculture as an industry and prevent conflicts between voluntary agricultural district participants and non-farm landowners in proximity to districts.

Section 1101. Public Notification

- (1) The Advisory Board, in cooperation with the county, shall take measures as set forth below to provide notification to property owners, residents, and other interested persons in and adjacent to any designated agricultural district with a goal of informing all current and potential residents and property owners in and adjacent to an agricultural district, that farming and agricultural activities may take place in this district any time during the day or night.

- (a) Signs identifying approved agricultural districts shall be placed by the farmer upon the property and along the rights-of-way of major roads in a way calculated to reasonably notify the public and adjoining owners of the presence of the farm property.
- (b) Information identifying approved districts shall be provided to the Register of Deeds office, the Watauga Soil and Water Conservation District, the Cooperative Extension office, the Farm Service Agency, the Watauga County Planning and Inspections Department, and the Watauga County Tax Department.
- (c) The following notice shall be displayed in a prominent position in the office of the Register of Deeds and the public access area in the Watauga County Tax Department:

NOTICE TO REAL ESTATE PURCHASERS IN WATAUGA COUNTY
WATAUGA COUNTY AGRICULTURAL DISTRICTS

Watauga County has established agricultural districts to protect and preserve agricultural lands and activities. These districts have been developed and mapped to inform all purchasers of real property that certain agricultural activities, including but not limited to pesticide spraying, manure spreading, machinery and truck operations, livestock operations, sawing, and similar activities may take place in these districts any time during the day or night. Maps and/or information on the location and establishment of these districts can be obtained from the Cooperative Extension office, County Planning and Inspections Department, Natural Resources Conservation Service, the Farm Service Agency office, and the County Tax Department.

- (2) Limit of liability -- In no event shall the County or any of its officers, employees, or agents be held liable in damages for any misfeasance, malfeasance, or nonfeasance occurring in good faith in connection with the duties or obligations imposed by this ordinance.
- (3) No cause of action -- In no event shall any cause of action arise out of the failure of any person, including a person researching the title of a particular tract to report to any person the proximity of the tract to a qualifying farm or voluntary agricultural district as defined in this ordinance.

Section 1102. Expenditure of County Funds for Non-Farm Uses

Prior to expending any monies which would convert land in a voluntary agricultural district to non-farm uses, the county or any other local unit of government shall submit to the Advisory Board detailed information showing that said governmental unit has considered alternatives. Such consideration shall include the criteria listed in Article X, Section 1001 (3), (a) through (c).

Section 1103. No Districts in Designated Growth Corridors

Agricultural districts will not be permitted in designated growth corridors, as delineated on the official county planning map without the approval of the Board of Commissioners. Districts located in growth corridors designated after the effective date of this program may remain, but shall not be expanded within the growth corridor area without the approval of the Board of Commissioners. Districts located in growth corridors designated after the effective date of this program may expand to include adjoining property purchased by a landowner presently participating in the Watauga County Voluntary Farmland Preservation Program Ordinance. The approval of the Board of Commissioners will be on a case by case basis.

Section 1104. Waiver of Water and Sewer Assessments

- (1) Purpose of Section. The purpose of this section is to help mitigate the financial impacts on farmers by some local and state capital investments unused by such farmers.
- (2) Procedure. The waiver procedure shall be as follows:
 - (a) Landowners belonging to voluntary agricultural districts shall not be assessed for, or required to connect to, water and/or sewer systems.
 - (b) Water and sewer assessments shall be held in abeyance, without interest, for farms inside a voluntary agricultural district, until improvements on such property are connected to the water or sewer system for which the assessment was made.
 - (c) When the period of abeyance ends, the assessment is payable in accordance with the terms set out in the assessment resolution.
 - (d) Statutes of limitations are suspended during the time that any assessment is held in abeyance without interest.
 - (e) Assessment procedures followed under G.S. 153A-185 et seq. shall conform to the terms of this article with respect to qualifying farms that entered into preservation agreements while such article was in effect.
 - (f) Nothing in this section is intended to diminish the authority of the county to hold assessments in abeyance under G.S. 153A-201.

ARTICLE XII
NORTH CAROLINA AGENCY NOTIFICATION

Section 1200. Consultation with N.C. Department of Agriculture and Other Agencies

The board may consult with the Cooperative Extension office, the Natural Resources Conservation Service office, the Farm Service Agency office, the N.C. Department of Agriculture, and any other such agency the board deems necessary to properly conduct its business.

Section 1201. Recording the Program Ordinance

An official copy of this program ordinance shall be recorded with the North Carolina Commissioner of Agriculture's office after adoption. At least once a year, the county shall submit a written report to the Commissioner of Agriculture, including the status, progress and activities of the county's farmland preservation program, and voluntary agricultural districting information regarding:

- (1) Number of landowners enrolled;
- (2) Number of acres applied;
- (3) Number of acres certified;
- (4) Number of acres denied; and
- (5) Date certified.

ARTICLE XIII
LEGAL PROVISIONS

Section 1300. Severability, Conflict with Other Ordinances and Statutes, and Amendments

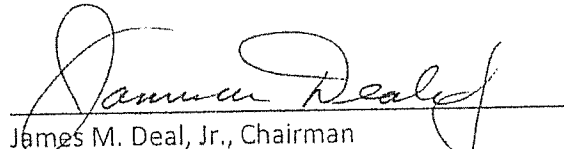
- (1) Severability. If any article, section, subsection, clause, phrase or portion of this ordinance is for any reason invalid or unconstitutional as determined by any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this ordinance.
- (2) Conflict with other ordinances and statutes. Whenever the provisions of this ordinance conflict with other ordinances of Watauga County, this ordinance shall govern. Whenever the provisions of any federal or state statute require more restrictive provisions than are required by this ordinance, the provisions of such statute shall govern.

- (3) Amendments. This ordinance may be amended from time to time after a public hearing, notice of which will be given in accordance with the Public Meeting Laws, GS 143-318.12, and in consultation with the Agricultural Advisory Board to the Board of Commissioners.

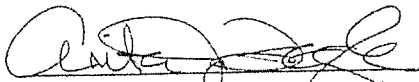
ARTICLE XIV
ENACTMENT

The Watauga County Board of Commissioners hereby adopts and enacts the preceding articles and sections of this ordinance.

ADOPTED this the 16th day of November, 2010.


James M. Deal, Jr., Chairman
Watauga County Board of Commissioners

ATTEST:


Anita Fogle, Clerk to the Board

[SEAL]

**APPENDIX IV
FARMER SURVEY RESULTS
(SPREADSHEET)**

WATAUGA FARMER SURVEY RESULTS

Location	Acres	Market	Transition Plan	Interest in options	Concerns	Vision
North Fork	108	Wholesale trees, cattle	N	N	Hardly any sheep, not much cattle left	It will probably continue as trees and cattle
New River	4	farmers market	N	Y	Farmland is disappearing, new homes on prime farmland	Take pride in local food traditions, cold weather crop leader
Blowing Rock	13	distributors, CSA	N	Y	Farmland is disappearing	New River Organic Growers, CSA's lead to viable farms for Watauga
Vilas	8	on farm, farmers market	N	Y	Viability of small farms -- they have to make money	Educate farmers and consumers, local food restaurants, local economy
Cove Creek	8	on farm, restaurants	N	Y	Loss of family farms, too much development, land prices	Educate people about farming and local foods
Meat Camp	9	on farm, restaurants	N	Y	Mass and uncontrolled development taking over farmland	Keep the farms we have, more young farmers
Laurel Creek	300	Ship trees to east US	Y	N		More small-scale organic farms
Laurel Creek	500	Virginia Livestock Mkt.	Y	Y	Lack of young farmers	Would like to see Watauga continue with profitable farming, thus increasing interest in the younger generation.
	50-crops	Wilkes Livestock Mkt			Lack of farm markets	
	150-pasture				High prices for farmland	
	300-woodland					
Laurel Creek	188	Abington, VA	Y	Y	Stay the course	Would like to see it continue in a healthful nature that is well and healthy.
	2-corn				Hard to get young people involved	
	44-pasture (beef)					
	142-woodland					
Deep Gap	55	Abington, VA	N	Y	Making money	I think farming is about over.
	20-hay				Zoning	
	30-pasture-cattle					
	5-woodland					
Meat Camp	40	Choose & Cut	N	N		
	15-Christmas trees					
	25-woodland					
Banner Elk	15	Choose & Cut	Y	Y	Would like to see it stay rural.	Very limited
	1-pasture				Think it's too late because of local land prices & degree of development.	Farms too small to make much impact
	12-Christmas trees					

Beaver Dam	26	6-Christmas trees 8-Woodland	Choose & Cut Retail lots out of state	Y	Y	Afraid development will push out the farms. Land value makes it too tempting for small farmers to sell out.	Would like to see the county get behind preserving our farmlands and creating better marketing for all types of farm crops.
Stoney Fork	22	12-pasture-sheep horses 10-woodland	Abington, VA stock exchange		Y	Small size of farms Need for specialized crops	A way of life-keep a sense of community (as with the Amish)
Meat Camp	40	15-pasture-beef cattle & horses 8-Christmas trees 13-hay 4-woodland			Y	Getting crops you can sell	Not good
North Fork	15	.5-veggies 14-woodland		N	Y	Loss of farmland & farmers	Strong local food economy
Bethel	3.2	5-Fraser Fir 1-woodland		N	N	Not much support for small farms which are a large percent of total numbers	Likely will continue to decline Farming needs a dramatic increase in pest research that NC State is failing to fund. Need a new source of funding for pest research if Christmas tree industry is to thrive.
North Fork	5	2-fruits/veggies 2-woodland	Wat. Co. Farmers Mkt.		N	Expense of land Access to direct markets	Diversified, high revenue, ecologically sound, locally supported
Pottertown							

Meat Camp	19 4-veg, herbs, poultry	Farmer's Markets & direct	N	Is it viable or will the death continue?	Hopefully to preserve as much as possible.
	1 pasture				
	14 woodland				
Stony Fork	100 40-Christmas trees	Locally to large wholesalers	Y	Profitability, pressure from non-farm minded residents	Try to hold on to what we have. Better alternative solutions.
	60-woodland				
?	Co-op	New River Organic Growers		need more farmers	
Shawnee	45 acres	Tri-State Market (Abingdon)			
	10 hay	Local customers	N	Improved farm markets	Fewer small farms unless farm markets increase
	12 pasture				
	30 + woodland				
Laurel Creek	175 acres	Abingdon (cattle)	Y	Loss of farmland	Landowner decide
	5 hay				
	2 corn				
	35 pasture				
	130+ woodland				
Brushy Fork	50 acres	Asheville Coop (tobacco)	Y	Overuse of chemicals	Increased marketing capabilities
	35 pasture	Abingdon (cattle)		Lack of farm markets	to increase interest in farming in younger generations
	.5 tobacco				
	14.5 woodland				

APPENDIX V

SAMPLE ORDINANCE FOR ADOPTION OF AGRICULTURAL DEVELOPMENT AND FARMLAND PRESERVATION PLAN

**SAMPLE ORDINANCE FOR ADOPTION OF
AGRICULTURAL DEVELOPMENT AND FARMLAND
PRESERVATION PLAN
FOR
WATAUGA COUNTY,
NORTH CAROLINA¹
BASED ON SAMPLE ORDINANCE FROM North Carolina
Department of Agriculture and Consumer Services**

Adopted by the
Board of County Commissioners,
Watauga County
_____, 2010

**ARTICLE I:
STATEMENT OF NEED FOR ACTION**

Agriculture makes a major contribution to the well being of Watauga County residents, both those living within, and outside the county's cities and towns. In addition to direct contributions to the local economy in the form of product sale receipts and expenditures on farm services and inputs, along with employment on farms and farm support businesses, farmers also make significant contributions as stewards of the remaining amounts of undeveloped land (often called "open-space") in the county. Their stewardship protects the county's soil and water resources, recharges groundwater and abates storm water runoff, connects wildlife habitat, and safeguards the scenic and historic vistas that have defined our county's character. Enabling farmers who want to continue to farm to do so is a cost effective way of maintaining the quality of life of everyone in Watauga County.

Watauga County is losing farmland. Farming faces a unique set of stresses, some of which Watauga County with thoughtful action can help to mitigate.

**ARTICLE II:
AUTHORITY FOR COUNTY ACTION**

In 1986, the North Carolina General Assembly passed the North Carolina Farmland Preservation Enabling Act.² The stated purpose of this Act is "to authorize counties to undertake a series of programs to encourage the preservation of farmland as defined herein."³ In addition to enabling counties to create Voluntary Agricultural District ordinances, which Watauga County adopted on October 2, 2000, the Act also created the North Carolina Farmland Preservation Fund and enabled counties to develop purchase of agricultural conservation easements (PACE) programs. By later amendment, the General Assembly created a matching mechanism for distribution of Farmland Preservation Trust

Fund monies, with preference to counties adopting a countywide farmland protection plan.⁴ The Act declares that a countywide farmland protection plan shall:

1. Contain a list and description of existing agricultural activity in the county.
2. Contain a list of existing challenges to continued family farming in the county.
3. Contain a list of opportunities for maintaining or enhancing small, family-owned farms and the local agricultural economy.
4. Describe how the county plans to maintain a viable agricultural community and shall address farmland preservation tools, such as agricultural economic development, including farm diversification and marketing assistance; other kinds of agricultural technical assistance, such as farm infrastructure financing, farmland purchasing, linking with younger farmers, and estate planning; the desirability and feasibility of donating agricultural conservation easements, and entering into voluntary agricultural districts.
5. Contain a schedule for implementing the plan and an identification of possible funding sources for the long-term support of the plan.⁵

The statute suggests that such a countywide farmland protection plan may be formulated with the assistance of an agricultural advisory board, which Watauga County appointed as part of its Voluntary Farmland Preservation Program ordinance. That board, known as the Farmland Preservation Advisory Board, will take the lead role in administering this plan and reporting to the Board of County Commissioners on its progress.⁶

ARTICLE III: OVERVIEW OF WATAUGA COUNTY AGRICULTURAL ACTIVITY⁷

A. Agricultural Production

Watauga County's family farms produce a diverse array of agricultural products, including beef cattle, Christmas trees, and a wide variety of fruits, vegetables, and specialty products.⁸

B. Economic Impact of Agricultural Production

- Annual Gross Sales of Agricultural Products in Watauga County: > \$11 million
- 2007 Cash Receipts from Sales of Agricultural Products in Watauga County: \$11.5 million
- Ranking of Agriculture Among Watauga County Industries: 2nd
- Types of Farm Related Businesses in Watauga County: processing farm products; vehicles and equipment dealers and other enterprises; contract labor.

C. Family Farm Statistics

(USDA Agricultural Census, 2007)

- Total Number of Farms in Watauga County (2007): 587
- Total Number of Farms in Watauga County (2002): 731
- Percentage Decrease in Number of Watauga County Farms (2002 to 2007): 20 %
- Number of Farms in Watauga County Owned by Families or Individuals (2007): 94%
- Percentage of Total Watauga County Farms (2007):
- Average Farm Size in Watauga County (2007): 78 acres, a decline over historic trends
- Farms in the 50 to 179 acre size range have declined in recent years. ⁹
- The number of smaller farms has increased, including those between 10 and 49 acres in size and those less than 10 acres.
- Number of Watauga Principal Farm Operators Listing Farming as Full-Time Job (2007): 200
- Percentage of Total: 34 %
- Number of Watauga Farms Listed as Retirement Farms (2007): 133
- Percentage of Total Watauga Farms (2007): 23 %
- Number of Watauga Farms Listed as Residential/Lifestyle Farms (2007): 282
- Percentage of Total Watauga Farms (2007): 48 %
- Acres of Watauga County Farmland Listed as Retirement Farms (2007): 27,612
- Percentage of Total Watauga Farmland (2007): 60%

Historically, most farm families in Watauga depended on agriculture for their primary employment, whereas many now depend greatly on off-farm employment, presumably to offset the low profitability of agriculture.¹⁰

Family farms make up the majority of agricultural production in the county. According to the 2007 USDA Census of Agriculture, Watauga County's agriculture industry consists of predominately family owned businesses with the majority of farms owned by individuals or families, with the remainder owned as partnerships and family corporations. In 2002, there were 731 farms in Watauga County. By 2007, that number decreased by 20 percent to a total of 587 farms. The average farm size in 2007 was 78 acres, a decline over historic trends.

D. Farm Land Use Trends

- Total acres of farmland in Watauga County (2007): 45,782 acres
- Total acres of farmland in Watauga County (2002): 51,758 acres
- Percentage decrease in acres of farmland (2002 – 2007): 12% ¹¹
- Percentage decrease in farmland acreage (2002 – 2007): 12%

- Percentage of Watauga County Farmland in Pasture/Hay (2007): 29.21%
- Percentage of Watauga County Farmland in Row Crops (2007): 25.63%

A growing number of farms in Watauga are actively enrolled in the Conservation Reserve Program and Wetland Reserve Program.¹²

E. Agricultural Soils

Soils on more level and gently sloping areas in Watauga County are for the most part generally well suited to agricultural uses. Many of the major valleys include soils mapped on the USDA-NRCS Soil Survey as Soils of Statewide Importance or Local Importance. Bottomlands in Watauga contain the highest concentrations of Prime Agricultural Soils. These categories define the suitability of various soils for agricultural uses, based on limitations of the soils, range of usefulness for agriculture, the risk of environmental damage such as erosion when they are used for agriculture, and how easily their limitations can be overcome by remedial measures. Prime Agricultural Soils are soils that generally have few limitations, support the widest range of uses, and carry the least risk of environmental damage. Soils of Statewide Importance have some limitations that reduce the range of potential crops or require moderate conservation practices. Soils of Local Importance have greater limitations on range of potential crops, require special conservation measures, or both. The Townships of Meat Camp, Stony Fork, Watauga, and Laurel Creek have significant concentrations of these agricultural soils.

ARTICLE IV: CHALLENGES TO AGRICULTURE IN WATAUGA COUNTY

Surveys of Watauga County farmers and other owners of farmland identified some of the strengths of county agriculture as well as its challenges.¹³ While the agricultural industry remains an important part of Watauga County's economy, both farmers and farmland owners believe that challenges such as taxes, low commodity prices, environmental regulations, development pressures, complaints from neighbors, vandalism and trespassing are having a significant impact on the future of agriculture within the county. To help address the challenges facing agriculture, some Watauga County farmers and farmland owners surveyed for the Plan expressed interest in participating in a variety of local and state programs. Following are some of the specific challenges farmers identified in the survey:¹⁴

A. Falling Prices and Low Profitability.

Watauga County farmers have identified low prices as well as the high costs of taxes, labor, regulatory compliance requirements and utility expenses as factors affecting their bottom line. Low commodity prices, coupled with rising costs of production, have resulted in low profitability and inadequate farm income for farmers across North Carolina.

B. Aging Farm Operators.

In Watauga County, the average age of a farm operator was 59 in 2007, significantly older than the county's median age of 29.9 for the general public.¹⁵ This indicates that a large transition will take place over the next 20 years, and with fewer younger farmers available to take over production on these farms, many may fall out of production and be divided up and sold through estate settlement processes. Additionally, generations of farming expertise may be lost, an invaluable asset to the local agricultural economy.

C. Rising Property Values and Taxes.

Watauga County is facing increased development of seasonal homes, year round homes, and resorts, with tourism ranking as the number one sector of its economy. Land prices are rising accordingly across the county, with farmland selling at record high prices, particularly where suited for commercial or large-scale residential development. Farmers in the county are facing limitations on their ability to expand operations, due to increased land prices and taxes, however, their equity as landowners increases. Holding land as an investment by both non-farm and farming owners is encouraged when a reasonable rate-of-return on land investment can be expected. Holding land can also be encouraged through property tax policies and by encouraging or facilitating rental arrangements with farmers.

D. Conflicts with Non-farmer Neighbors.

Watauga County farmers have indicated that conflicts with non-farming neighbors are increasing. With residential development bringing new neighbors into Watauga's farming areas, the dust, noise, smells, and perceived inconveniences associated with agricultural production lie at the heart of these conflicts. While Watauga County's Voluntary Farmland Preservation Program supports and protects farmers against potential nuisance lawsuits filed by neighbors, those farmers not enrolled in the program may face litigation costs.

E. Loss of Local Farm Services.

As noted above, a significant amount of Watauga County businesses support agriculture enterprises, and in turn count on agriculture as a large portion of their service base. Farm supply businesses in Watauga County are essential for the long-term viability of farming in the county. To avoid increased travel times, operating costs, and downtime for farm equipment, Watauga County can work with its farm supply businesses to ensure that they maintain a strong presence in the county. To support a strong farm economy in the county, financial services tailored to local farm needs are also essential.

F. Fractured Infrastructure from Poorly-planned Residential Development.

Time is a very important asset in agricultural production. The ability to achieve certain goals within certain windows of weather and season are critical to successful farming. Often these schedules are based on the farmer's reliance of corridors of transportation between fields, services and markets. As poorly-planned development encroaches into farming areas, these corridors between fields or other necessary

destinations can be disrupted, increasing farmers travel time and operating costs. Also, increased traffic in these corridors imposes similar costs.

**ARTICLE V:
OPPORTUNITIES FOR
ENHANCING AGRICULTURE IN
WATAUGA COUNTY**

A. Guiding Principles behind this Plan¹⁶

1. Integrate economic development with farmland protection. Keeping farms viable is as important as protecting the resource base essential for farming and it is more cost efficient.
2. Target agricultural and farmland protection initiatives toward blocks of viable farmland necessary for the continuation of farming in the county, as separate from farmland that is valued mainly for its scenic views, water resources, or historic landscapes.
3. Educate consumers and elected officials on the relationship between a healthy local agricultural economy and the public benefits working farmland provide.
4. Give farmers incentives to protect farmland in giving them a fair return for the benefits their stewardship of the land provides the non-farming public.
5. Examine the long-term cost effectiveness of incentive programs that compensate farmers for not developing their land. By combining tax, spending and regulatory programs, local communities can strongly support agriculture and meet budgetary needs.
6. Develop land use policies that work for agriculture.
7. Encourage inter-municipal cooperation. Since farming spans town and county borders, farmland protection requires cooperation between towns and among levels of government. Efforts to promote development in one town can derail farmland protection efforts in bordering towns.
8. Develop a coalition of interests to support agricultural and farmland protection efforts. Reach out to non-farmers by organizing farmers' markets, farm events and workshops. Unite the farmland protection interests of farm and non-farm community members by protecting farmland that provides scenic views, includes important water resources, or preserves historic landscapes, and recognize the public benefits and public costs associated with protecting land for these values.
9. Promote thoughtful land use planning to prevent conflicts between farmers and neighbors. Manage residential growth in farming communities; buffer farms from neighboring large-scale residential developments.

B. Existing Efforts and Agricultural Protection Tools

1. *County Comprehensive Land Use Plan* (the Watauga County Comprehensive Plan, adopted in 2010, addresses agriculture as a land use in the county)
2. *County Voluntary Agricultural District Program*. As noted above in Article II, the North Carolina General Assembly enabled counties to adopt Voluntary Agricultural District (VAD) ordinances to effectively create areas "to increase identity and pride in the agricultural community and its way of life and to increase

protection from nuisance suits and other negative impacts on properly managed farms.”¹⁷ Farmers, by enrolling their farm in a VAD by entering into a revocable agreement with the county to forego developing their land for a period of ten years, enjoy certain protections of their operation, including waiver of sewer and water assessments, record notice to non-farm neighbors of proximity to a farming operation, and public hearing before condemnation of farm property by eminent domain. On October 2, 2000, Watauga County passed a VAD ordinance whereby optional strategies for protection of farmland were adopted. Also pursuant to the ordinance, an Agricultural Advisory Board was appointed by the Board of County Commissioners to represent agricultural interests in the county.¹⁸ While the VAD ordinance encourages investment in agriculture, it does not represent a permanent land protection measure as districts rely heavily on voluntary enrollment and allow for withdrawal.¹⁹

3. *Purchase of Agricultural Conservation Easements (PACE) Program.* The North Carolina Farmland Preservation Enabling Act enables counties to purchase agricultural conservation easements on qualifying farmland with the voluntary consent of the landowner. Under such a program the county could pay farmers willing to accept a permanent (or temporary) easement limiting subdivision of their land for residential development the difference between the value of their land for development and the value for its use as farming. Farmers would be free to use this payment for any purposes they choose: retirement investment, capital improvement, etc. Payment options could include lump-sum payment or annual payments over a set period. In other areas around the country this type of program has been funded through municipal and county bond issues, a percentage of real estate transfer tax or mortgage tax revenues, or as a regular budget line item. Easements under the program can be drafted to offer farmers maximum flexibility to continue to profitably work their land, and change their operation as their needs dictate, as long as they meet the requirements of state law regarding the purpose of agricultural conservation easements. By North Carolina statute, “such easements may permit the creation of not more than three lots that meet applicable county zoning and subdivision regulations, and shall be perpetual in duration, provided that, at least 20 years after the purchase of an easement, the county may agree to reconvey the easement to the owner of the land for consideration, if the landowner can demonstrate to the satisfaction of the county that commercial agriculture is no longer practicable on the land in question.”²⁰
4. *State Conservation Funding Tools*
 - a. Farmland Preservation Trust Fund. The North Carolina FPTF is created by statute “for the purchase of agricultural conservation easements” in transactions with both governmental and private non-profit organizations.²¹ These monies, when available, can be matched with certain federal funds described below. The FPTF is administered by the Department of Agriculture or its designee.
 - b. Clean Water Management Trust Fund. The North Carolina CWMTF is a voluntary, incentive-based water quality program to help local governments, state agencies and conservation non-profit groups finance projects to protect and restore surface water quality. Farm and forest land

owners are eligible to receive trust fund monies for sale of the development rights to their land under certain guidelines and qualifications. These funds can be combined with certain federal conservation funds listed below.²²

- c. Division of Soil and Water Conservation Agricultural Cost-Share. This program is administered by the Division of Soil and Water Conservation in the Department of Environment and Natural Resources. It is delivered at the local level by 492 elected and appointed volunteer District Supervisors who are assisted by a cadre of experts. Participating farmers receive 75% of predetermined average costs of installed best management practices (BMPs) with the remaining 25% paid by farmers directly or through in-kind contributions. Some applicants may be eligible to receive as much as \$75,000 per year. Also the program provides local Districts with matching funds (50:50) to hire personnel to plan and install the needed BMPs, including Riparian Buffers, Strip cropping, and Grassed Waterways²³.
 - d. Natural Heritage Trust Fund. Like the FPTF and CWMTF, this fund may be available to purchase development rights on properties with outstanding natural or cultural values.²⁴
 - e. North Carolina Conservation Tax Credit. North Carolina law allows a credit against individual and corporate income taxes when real property is donated for conservation purposes. Interests in property that promote specific public benefits may be donated to a qualified recipient. Such conservation donations qualify for a substantial tax credit.²⁵
5. *Federal Conservation Funding Tools*
- Below are some of the voluntary federal programs that are part of The Farm Security and Rural Investment Act of 2002 (commonly known as the 2002 Farm Bill) and administered by the Natural Resources Conservation Service (NRCS) and Farm Services Agency (FSA) of the United States Department of Agriculture (USDA). They are designed to compensate farmland owners for the conservation value of their land. Like local PACE programs, they have the dual effect of safeguarding the environmental benefits of farmland as open space while injecting dollars into the local economy via the farmland owner.²⁶
- a. Farm and Ranchland Protection Program (FRPP). The Farm and Ranchland Protection Program provides federal funds to help purchase development rights, keeping productive farmland in agricultural use while compensating the farmland owner for the conservation value of his or her land. The FRPP program matches state and local PACE programs up to 50% of the easement purchase price, working through state, tribal and local governments and land trusts.
 - b. Conservation Reserve Program (CRP). The Conservation Reserve Program reduces soil erosion, protects the nation's ability to produce food and fiber, reduces sedimentation in streams and lakes, improves water quality, establishes wildlife habitat, and enhances forest and wetland resources. It encourages farmers to convert highly erodible cropland or other environmentally sensitive acreage to vegetative cover, such as tame

or native grasses, wildlife plantings, trees, filter strips, or riparian buffers. Farmers receive an annual rental payment for the term of the multi-year contract.

- c. Conservation Reserve Enhancement Program (CREP). (where available) CREP is a voluntary program that seeks to protect land along watercourses that is currently in agricultural production. The objectives of the program include: installing 100,000 acres of forested riparian buffers, grassed filter strips and wetlands; reducing the impacts of sediment and nutrients within the targeted area; and providing substantial ecological benefits for many wildlife species that are declining in part as a result of habitat loss. Under CREP, landowners can voluntarily enroll eligible land in 10-year, 15-year, 30-year, and permanent contracts. The state will pay additional bonuses to landowners that enroll land in 30-year and permanent agreements. Cost sharing will be available for installation of forested riparian buffers, grassed filter strips, wetlands restoration practices, water control structures, livestock exclusion, and remote livestock watering in order to increase the efficiency of enrolled practices. Currently available in the Neuse, Tar-Pamlico and Chowan river basins and the Jordan Lake watersheds.²⁷
 - d. Wetlands Reserve Program (WRP). The Wetlands Reserve Program offers landowners the opportunity to protect, restore, and enhance wetlands on their property. The NRCS provides technical and financial support to help landowners with their wetland restoration efforts. The NRCS goal is to achieve the greatest wetland functions and values, along with optimum wildlife habitat, on every acre enrolled in the program. The WRP offers landowners three options: permanent easements, 30-year easements, and restoration cost-share agreements of minimum 10-year duration.
 - e. Environmental Quality Incentives Program (EQIP). This program provides a source of funding for nutrient management systems. The program offers technical, financial, and educational assistance in designated priority areas to install or implement structural, vegetative, and management practices called for in five to ten year contracts for most agricultural land uses.
 - f. Wildlife Habitat Incentives Program (WHIP). This program encourages creation of high quality wildlife habitats that support wildlife populations of national, state, tribal and local significance by providing technical and financial assistance to landowners and others to develop upland, wetland, riparian, and aquatic habitat areas on their property.
6. *State Right-to-Farm Law*²⁸ By statute, North Carolina farmers are granted the right to farm without legal interference from non-farm neighbors and local governing bodies, subject to certain limitations. Pre-litigation mediation of farm nuisance claims is mandatory.²⁹
 7. *Present Use Value Property Tax*³⁰ Working farm, forest and horticultural lands by state statute are afforded a property tax assessment based on their agricultural working value, as opposed to the value of their land for industrial or residential

development. A working farm must earn \$1000 in gross sales annually to qualify for this differential assessment. This assessment affords farmers some amount of cost control that would otherwise limit their ability to farm profitably.

8. *County Farmer's Market*: The Watauga County Farmers Market operates in Boone on Saturdays and Wednesdays during the growing season. The High Country Farmers Market operates on Sundays in Boone.

C. Opportunities for Enhancing Local Agricultural Economy³¹

1. Strengthen farm viability and the agricultural economy by promoting the economic development of the agricultural sector.
 - a. Maintain and enhance local agricultural infrastructure and support services.
 - b. Target agriculture with economic development and marketing initiatives, including agritourism development.
 - c. Facilitate private investment of capital in the local agriculture industry.
 - d. Provide farmers and agribusiness investors with business planning and development assistance.
 - e. Diversify the agricultural production base.
2. Support farm operations and the right to farm by ensuring farmers have a supportive business environment.
 - a. Develop policies and ordinances that encourage agriculture and do not inhibit or discourage farming operations.
 - b. Increase non-farmer neighbor awareness of farm practices and issues.
 - c. Work with existing statewide farm transition network (if applicable) or develop local program to develop farm management capacity of young farmers.
 - d. Continue support of existing programs that reward farm practices that maintain and improve water, air and wildlife habitat quality.
3. Protect farmland as a valuable natural resource by developing sound land use policies and conservation measures that encourage agricultural production.
 - a. Identify productive areas of agricultural land. Distinguish productive agricultural soils from land with scenic and public good qualities. Evaluate the highest value use of the land relative to its value for use for agricultural production to understand the cost of maintaining agricultural lands.
 - b. Educate local government and landowners on planning techniques and tools that reduce pressures on farming operations.
 - c. Encourage protection of farmland located in public water source areas, including reservoirs, streams, and water recharge areas.
4. Foster greater recognition and public support for agriculture by educating the public on agriculture's economic, community and environmental benefits.
 - a. Demonstrate the value of agriculture to the public
 - b. Foster dialogue between nonfarmers, government officials and the agricultural community.
 - c. Build a coalition of organizations and citizens to promote awareness of local, state and national issues affecting Watauga County agriculture.

ARTICLE VI:
ACTION STEPS TO ENSURE A
VIABLE AGRICULTURAL COMMUNITY
IN WATAUGA COUNTY³²

A. Strengthen Farm Viability and the Agricultural Economy

1. *Pending Available Funding and based on an evaluation of need,, the County May Explore the Creation of a Part Time or Full Time Agricultural Economic Development Position*

Establishing a new Agricultural Economic Development position for the county will be necessary for carrying forward the economic initiatives necessary for farm viability. While a part-time position may be warranted based on available funds and demand, a full-time position will be able to dedicate the effort required to coordinating the efforts of the various participants (program staff in county economic, labor, tourism, planning, agricultural, and conservation departments and other interested non-profit staff) to implementing this plan, as well as prioritizing, developing and implementing the various initiatives called for in this plan. Duties of such a position should include:

- a. Determining priorities, developing strategies, and achieving benchmarks for economic development efforts
 - b. Identifying and seeking additional funds for economic and business development for county initiatives and individual producers through grant writing
 - c. Communicating and meeting on a regular basis with stakeholders in agricultural economic development process
 - d. Developing marketing initiatives for local agriculture
2. *Expand Business Development Assistance to Farm Businesses.* To meet the challenges outlined above, farmers need more access to business development assistance, particularly as traditional agricultural markets fade and alternative enterprises are needed. This assistance includes business development and planning, market research and communication, and financing opportunity. Efforts to increase assistance include:
 - a. Establishing a business development program specifically targeted at agricultural businesses, consisting of a network of business consultants, small business development counselors, and attorneys familiar with small business and agricultural law who are willing at a lower cost or volunteer basis (depending on how program is set up) to provide assistance.
 - b. Working with North Carolina Cooperative Extension to disseminate published materials on agricultural business issues to area professionals to expand their knowledge of agriculture thus increasing their ability to assist farmers.
 - c. Offer workshops to farmers on business planning and development, research, marketing, financing, conservation funding, and estate planning.
 - d. Provide grant-writing assistance for federal, state and other non-profit funding opportunities to assist with diversification, etc.

- e. Develop a local directory of the network described in (a) above.
- 3. *Improve Access to Financing and Capital.* Such efforts could include:
 - a. Provide assistance in obtaining grants and low interest loans for business start-up, expansion, retention and diversification. Commercial lenders and farm credit lenders rely on the equity value of the farm rather than farm income as the basis for loans.
 - b. Rural Center microloans, WNC Ag Options, and NC Cost Share programs offer important financing opportunities for farmers.
- 4. *Expand Efforts to Promote Watauga County Farm Businesses and Farm Products.* The development pressures on agriculture outlined in Article IV above also provide opportunities for county farmers and agribusinesses in the form of new consumers. Every effort should be made to educate them on the association between a healthy local agricultural economy and the life-style many have sought to achieve by locating to our county. These efforts could include:
 - a. Creation of a website and other print publications to identify locally grown products.³³ This website can also be used by farmers to identify purchasing opportunities and the business development assistance outlined above;
 - b. Work with the organizers of the local farmers markets (if applicable) and assist with their marketing effort where possible;
 - c. Work with local retail stores and restaurants to purchase and promote products grown locally in the county;
 - d. Work with local institutions such as schools and state offices to purchase food grown locally;
 - e. Expand cooperative efforts with neighboring counties to create a regional identity that includes promotion of agriculture; and
 - f. Sponsorship of festivals, farm tours and other public recognition
- 5. *Improve the Marketing Capacity of Farmers:* Traditionally, farmers have relied on off-farm distributors to handle marketing and price negotiation for their products. Increasingly, farmers will recognize the value of direct marketing their products to county residents as they diversify and specialize their production. In addition to the steps outlined above, this item could include
 - a. Formation of new generation farm cooperatives for marketing purposes, financing of new ventures and purchasing of raw materials, such as fuel and electricity, or formation of less formal bargaining groups to jointly purchase farm supplies, cooperatively advertise farm products, provide better outlets for cull-dairy cows and facilitate use of custom service.³⁴ New River Organic Growers (NROG) is an important local example of this type of distribution and marketing cooperative.
 - b. Develop marketing workshops with input from farmers from other counties who have successfully diversified and direct-marketed their production.

B. Support Farm Operations and the Right-to-Farm

- 1. *Encourage the County and Towns to Meet the Infrastructure Needs of the Farm Sector*

- a. Adopt Sensible Subdivision regulations allowing farm businesses the flexibility to adapt their operations to new markets or otherwise expand existing operations. For example, some laws may restrict “farm stands,” road-side on-farm retail establishments. Careful consideration should be taken in drafting restrictions on farm stands to allow farmers to better market their on-farm products.³⁵
 - b. Streamline Building Permit process for farmers. Undue regulations or delays in obtaining a building permit can cause unnecessary hardships for farmers dependent on the seasonal growing cycle. Sometimes buildings or greenhouses have to be built quickly to allow a farmer to fully perform on contract. Also, delays in permitting can push the timing of a necessary improvement into the seasons where farmers are most busy.³⁶
 - c. Address other infrastructure needs outlined in farmer survey. May include working with state Department of Transportation on road maintenance priorities and needed signage near farm operations.
2. *Support the Right-to-Farm:* County and town officials should become familiar with the state right to farm law and seek to improve neighbor relations and general understanding of commercial farm activities and needs to reduce nuisance suits and generate positive public support for local agriculture. Action items can include:
 - a. Ensuring notice requirements under the Voluntary Agricultural District ordinance are followed in the counties land records system as well as posted notice in the tax office, as well as maintaining road signage in agricultural production areas.
 - b. Creating a “neighbor relations” packet for distribution to new county residents by the Chamber of Commerce, Visitors Bureau, tax office, etc. This can also be made available to farmers wishing to further educate their neighbors on farming operations.
 - c. Provide real estate brokers and lawyers with Voluntary Agricultural District maps, the above “neighbor relations” packet, and printed disclosure notices of agricultural operations and encourage them to share these materials with their clients.
 - d. Create an easy to understand brochure on the realities of living in agricultural areas and make available for distribution, and add such information to the county website.
 - e. Encourage respect for farm property.
 - f. Set up local arbitration referral program for farm-neighbor disputes. Pre-litigation mediation of farm nuisance suits is required in North Carolina.³⁷
 - g. Encourage municipalities to seek input from the Agricultural Advisory Board or other when developing and revising local ordinances.
 3. *Continue Support for Technical Assistance to Farm Operations.* The AED and Agricultural Advisory Board should undertake to be aware of the various service offered to farmers by Cooperative Extension, Soil & Water, NRCS and FSA, and should have available information on these services with contact information available to new and existing county farmers.

C. Protect Farmland as a Valuable Natural Resource

1. *Pending the Availability of Grant Funds, Develop a Purchase of Agricultural Conservation Easements (PACE) Program.* The North Carolina Farmland Preservation Enabling Act enables counties to purchase agricultural conservation easements on qualifying farmland with the voluntary consent of the landowner. Under such a program the county could pay farmers willing to accept a permanent (or temporary) easement limiting subdivision of their land for residential development the difference between the value of their land for development and the value for its use as farming. Farmers would be free to use this payment for any purposes they choose: retirement investment, capital improvement, etc. Payment options could include lump-sum payment or annual payments over a set period. In other areas around the country this type of program has been funded through municipal and county bond issues, a percentage of real estate transfer tax or mortgage tax revenues, or as a regular budget line item. Easements under the program can be drafted to offer farmers maximum flexibility to continue to profitably work their land, and change their operation as their needs dictate, as long as they meet the requirements of state law regarding the purpose of agricultural conservation easements.³⁸ By North Carolina statute, “such easements may permit the creation of not more than three lots that meet applicable county zoning and subdivision regulations, and shall be perpetual in duration, provided that, at least 20 years after the purchase of an easement, the county may agree to reconvey the easement to the owner of the land for consideration, if the landowner can demonstrate to the satisfaction of the county that commercial agriculture is no longer practicable on the land in question.”³⁹
2. *Encourage Local Land Use Policies that Support Agriculture and Protect Farmland.* How a county plans for growth will greatly impact the viability of its agricultural economy. The county should, through its land use planning (or review of its Comprehensive Land Use Plan) develop policies with take into consideration agricultural production and development. The planning board should include input from the Agricultural Advisory Board (or similar committee) in the planning process.
3. *Promote Tax Relief Incentives:* The county should undertake to ensure that county tax assessors have knowledge of the state’s Present Use Value statute with continuous training as necessary, and should undertake to educate farmland owners on the program, and how to apply and comply with present use valuation of farmland.
4. *Provide Technical Assistance on other Farmland Protection Initiatives and Conservation Options.* The AED specialist, with the support of the Agricultural Advisory Board, should develop educational programs for county farmland owners. The programs, in cooperation with local Cooperative Extension, NRCS, FSA, Soil & Water Conservation District staff, as well as area conservation groups such as land trusts, watershed protection groups, and wildlife organizations, should make farmers aware of the various conservation funds available for easement purchases, the tax benefits of donated easements, and basic principles of estate planning with conservation options.

5. *Educate the non-farming public on the environmental protection benefits of farmland protection and the detriments of its conversion.*

Develop a public education campaign to tie consumer support of local agriculture with open-space, clean water and air benefits, and enhanced wildlife habitat working farm and forestland provides. Include input from the local Soil & Water Conservation District, Resource Conservation and Development district, and area land trust on specific farm-related conservation projects they have worked on. Tie the education campaign to specific initiatives under this plan to build public political support for protection tools such as funding for a PACE program.

D. Foster Greater Recognition and Public Support for Agriculture

1. *Foster Greater Appreciation for Agriculture Among Government Officials and Non-farm Residents through Education and Outreach Efforts*
 - a. Continuing education of county and municipal officials and planning board members on farming issues and basics of agricultural law, as well as “smart growth” education on planning options that concentrate growth near existing centers and infrastructure. County officials should place a regular briefing by members of the Agricultural Advisory Board (or similar body) and/or the AED specialist on their meeting agendas.
 - b. Continuing efforts to keep members of the agricultural community involved in local government and planning.
 - c. Plan a Cost of Community Services (COCS) study to demonstrate the public fiscal advantages of land use planning for agricultural viability. In numerous COCS studies around the country, including two conducted by North Carolina State University for Chatham County (1998) and Wake County (2001), farmland has been shown to require significantly less in public service (fire protection, water and sewer, police, schools, etc) expenditures that it contributes in tax revenue, even at the lower differential assessment rate afforded under the present use value system. The results of this study should be publicized to further generate protection of the agricultural economy as sound county fiscal policy.
 - d. The AED should cultivate local and state media coverage of the benefits of agriculture to the well-being of the county, and should regularly communicate with media about achievements reached under this plan.
2. *Improve Communication and Networking within the Farm Community.* The county Agricultural Advisory Board should continue to represent the farming community in matters before the county government and should foster communication among farmers and agribusinesses to help foster a sense of community in the agricultural sector. Actions could include:
 - a. Hold a farmer symposium and/or appreciation dinner at which farmers have the opportunity to network with farmers from other commodity sectors and different areas of the county.
 - b. Encourage farmers to use the website established by the AED (see above) to participate in a bulletin board discussion or listerv for posing and answering questions, and for discussions about joint marketing opportunities.

- c. Develop a county-level farm transition program, which may include programs where older farmers transition skills to younger new farmers.
- 3. *Develop Stronger Connections Between Schools and Local Farms.* Schools offer an excellent opportunity to educate students and their parents about the importance of local farms.
 - a. Encourage local farms and orchards to offer tours to school students, and make schools and teachers aware of available educational tours for students by distributing materials to area schools at the beginning of each school year.
 - b. Coordinate with the North Carolina Farm Bureau's *Ag in the Classroom* program
 - c. Encourage school administrators (or the county school board) to purchase local produce for county schools

**ARTICLE VII.
SCHEDULE TO IMPLEMENT THIS PLAN
TO ENSURE A VIABLE AGRICULTURAL ECONOMY
IN WATAUGA COUNTY**

A. Multi-Year Action Steps⁴⁰

- 1. Based on the Availability of Funds for Specific Projects, the County May Consider the Following Actions:
 - a. Develop a budget, draft a job description, and begin search for an Agricultural Economic Development Specialist position.
 - b. Meeting of Agricultural Advisory Board to prioritize elements of plan implementation
 - c. Identify stakeholder groups and who will serve as their representative, develop a contact list
 - d. Hire Agricultural Economic Development Specialist position
 - e. Complete work plan and implementation schedule for AED specialist
 - f. Schedule and conduct stakeholder group meeting
 - g. Begin implementing prioritized elements of Agricultural Protection Plan
 - h. Schedule first county-wide meeting of farm and agribusiness operators and elected officials to discuss Agricultural Protection Plan
 - i. Develop schedule of farmer workshops on marketing, diversification, business planning, estate planning, etc.
 - j. Develop written materials (eg. brochures, packets) called for under plan
 - k. Develop web-site
 - l. Begin implementing workshop schedule

B. Key Stakeholders and Their Roles in Implementing the Plan⁴¹

- 1. *County Government:* By adopting the plan, the county Board of Commissioners has made agricultural protection official county policy. The county, through the Agricultural Advisory Board⁴², has committed to take the lead role in implementing this plan, based on the availability of funding, and drawing together the key players to coordinate its efforts and policies. The county Board of

Commissioners bears the responsibility for approving efforts to seek funding to help implement this plan.

2. *State Agencies:* Some key agencies providing assistance to agricultural producers in the county are North Carolina Cooperative Extension, North Carolina State University, and North Carolina A&T State University. The Soil & Water Conservation District provides technical support and cost-share funding to farmers for adopting certain conservation and water quality improvement practices. The Department of Agriculture and Consumer Services provides data on Voluntary Agricultural Districts throughout the state, as well as marketing advice to agricultural producers.
3. *Federal Agencies:* USDA has a strong presence in Watauga County with its NRCS and FSA local offices. NRCS administers financial and technical assistance program for farmland protection and conservation initiatives, including grants for best management practices, habitat improvement and purchase of development rights. FSA lends money to operators and provides credit counseling and farm business consulting.
4. *Business and Industry:* Participation of local farm businesses in this plan is critical its implementation. Private industry, both farm supply and nonfarm businesses and the Chamber of Commerce play an important role in promoting the agricultural sector of the county's economy. These organizations should also help in developing new markets such as tourism that will benefit agricultural producers.
5. *Non-governmental Organizations:* Organizations such as land trusts, historic preservation groups, and groups dedicating to assisting agriculture provide necessary advocacy and other service necessary for implementation of this plan.
6. *Residents:* The success of this plan ultimately relies on the participation of county residents in the local agricultural market. The proximity of their purchases to the producers ensures that more of each dollar paid for an agricultural item will return to the farmer, thus increasing his or her profitability and increasing the likelihood that he or she will continue to farm their land. Residents of the county can also recognize the importance of working farms to the local economy and environment and heritage of Watauga County by voting on county policies to support an effort to establish and subsequently support funding for a purchase of agricultural conservation easements program.

¹ This countywide Protection Plan is a suggestive model based on North Carolina statutory law and county agricultural protection plans (called farmland protection plans under NC law) from other states, primarily New York, which has a statewide program whereby the New York State Department of Agriculture and Markets awards grants to counties to formulate such plans. Certain narratives, structures and ideas have been borrowed from these plans, and are noted accordingly. The various descriptive narratives contained in this model plan are suggestions and can be changed to meet the special circumstances of an individual county.

NCGS §106-735 et seq.

NCGS §106-735(b). "Qualifying farmland" is defined in §106-737.

NCGS §106-744 (c)(1).

NCGS §106-744(e)(1-5)

other advisory board such a soil and water conservation district that has responsibility for land preservation in the county.

⁷ Counties in other states that have formulated county farmland protection plans first compiled data from agricultural censuses, real property tax roles, planning departments and soil and water conservation districts. This data collection reveals information about changes in the number of farms in the county, their ownership structure, soil types, number and value of agricultural assessments and on amount of land, and planning and zoning regulations, all of which sketch the background needed to put the issue of agricultural protection in perspective.

⁸ This information can be generally supplied by the 1997 Census of Agriculture, Table 2, "Market Value of Agricultural Products Sold and Farms by North American Industry Classification System: 1997 and 1992," pp. 192-204. An effort should be made to supplement this information with statistical updates from the North Carolina Department of Agriculture and Consumer Services, as well as a local farmer survey to capture transitions to alternative agricultural production.

⁹ The 50 to 179 measurement is a statistical category in Census of Agriculture, and is chosen here as the range containing the highest number of farms in North Carolina (18, 259 farms).

¹⁰ This information can be found by county in Table 11 of the North Carolina summaries of the 1997 Census of Agriculture, "Tenure and Characteristics of Operator and Type of Organization: 1997 and 1992,"

¹¹ According to the statistics for all of North Carolina, while the number of farms between 1992 and 1997 decreased the number of acres in farming *increased* by 186,364 acres. Results from individual counties vary with some following this pattern, others not.

¹² 1997 Census of Agriculture. The Conservation Reserve Program and Wetlands Reserve Program are explained further in Article V.

¹³ As noted above, county-wide farmland protection plans reviewed from other states are data-supported. Prior to drafting a plan, in addition to collecting the census data described above, county farmers and agribusinesses should be surveyed by the body or committee, perhaps the county's Agricultural Advisory Board if the county has adopted a Voluntary Agricultural District ordinance pursuant to NCGS §106-738, that has come together to address agricultural protection at the county level. This survey should put in real terms the county farmers' and farmland owners' values, concerns, optimism about the future, etc. that will guide framing of issues and their solutions in the county-wide plan. This survey data will give the Agricultural Protection Plan credibility with county residents, and will have the effect of laying the groundwork for future action.

¹⁴ These are concerns that have surfaced in surveys conducted in counties in other states. Because they tend to be uniform across county and state lines, these are suggested, though more may certainly surface specific to North Carolina or even the specific county.

¹⁵ Ibid, pp. 334-346

¹⁶ Adapted from "Keep It Growing: An Agricultural and Farmland Protection Plan for Rensselaer County (New York)", p. 28.

¹⁷ §106-738(b)

¹⁸ NCGS §106-739 outlines the authority the county may confer on it. The Board may have the authority to:

1. Review and make recommendations concerning the establishment and modification of agricultural districts;
2. Review and make recommendations concerning any ordinance or amendment adopted or proposed for adoption under this Article;
3. Hold public hearings on public projects likely to have an impact on agricultural operations, particularly if such projects involve condemnation of all or part of any qualifying farmland;
4. Advise the board of county commissioners on projects, programs, or issues affecting the agricultural economy or way of life within the county;
5. Perform other related tasks or duties assigned by the board of county commissioners.

As noted in Article II, the statute specifically states that formulation of a countywide farmland protection plan "may be formulated with the assistance of an agricultural advisory board designated pursuant to GS 106-739." §106-744(f).

¹⁹ Rensselaer County, NY, p. 29

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- ²⁰ NCGS § 106-744. Statutory authority for municipalities is outlined in §106A 401 through 407. North Carolina's conservation easement statute can be found at §121-34 through 42.
- ²¹ NCGS §106-744(c).
- ²² NCGS § 113-145.1 et seq. More information on the fund is available at www.cwmtf.net.
- ²³ Other program summaries that assist farmers in controlling non-point source runoff are available at www.enr.state.nc.us/DSWC
- ²⁴ NCGS §113-77.7
- ²⁵ Consult NCGS §§105-130.34 and 105-151.12 for the specific requirements of the CTC Program. For more information see www.enr.state.nc.us/conservationtaxcredit.
- ²⁶ For more program information and legislative authority, see www.nrcs.usda.gov/programs/farmbill/2002.
- ²⁷ CREP is listed here under federal programs, although it is partially funded by Clean Water Management Funds and administered by North Carolina Division of Soil and Water Conservation.
- ²⁸ NCGS §106-700 et seq.
- ²⁹ NCGS §7A-38.3.
- ³⁰ NCGS §105-277.2.
- ³¹ The opportunities listed here and addressed with action items in Article VI are borrowed liberally from Rensselaer County's plan.
- ³² These action steps should directly address the challenges outlined in Article IV.
- ³³ Orange County, North Carolina has created such a site, found at (www.orangecountyfarms.org).
- ³⁴ See Steuben County, NY, farmland protection plan.
- ³⁵ This sensible item is included in Suffolk County, NY's Agricultural Protection Plan which can be viewed at <http://www.co.suffolk.ny.us>.
- ³⁶ Ibid.
- ³⁷ NCGS §7A-38.3.
- ³⁸ The United States Internal Revenue Code also has certain legal requirements for the easement to qualify for income tax benefits. See Internal Revenue Code §170(h).
- ³⁹ NCGS §106-744. Statutory authority for municipalities is outlined in §106A 401 through 407. North Carolina's conservation easement statute can be found at §121-34 through 42.
- ⁴⁰ Drafting this schedule will depend entirely on when this plan is approved, taking into account the counties fiscal cycle, and particularly county farmers' seasonal availability to participate in the workshops and other implementation elements of this plan. Though the schedule here is for one year, it should look to the long term as well. It is probably a good idea to incorporate in the plan itself as it is part of the plan described in the Farmland Preservation Enabling Act.
- ⁴¹ Rensselaer County plan, p. 65.
- ⁴² Or equivalent body.

APPENDIX VI

SOURCES

Agricultural Development and Farmland Preservation Plan for Buncombe County, Buncombe County

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Growing Local: Expanding the Western North Carolina Food and Farm Economy. Appalachian Sustainable Agriculture Project, 2007.

Planning for an Agricultural Future: A Guide for North Carolina Farmers and Local Governments, American Farmland Trust, 2007.

http://farmlandinfo.org/documents/31721/FINAL_NCP4Ag_AFT.pdf

Planning the Future of Your Farm: A Workbook on Farm Transfer Decisions. (2nd Edition), North Carolina Farm Transition Network, 2009.

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Report on the Feasibility of a Small-Scale Small-Animal Slaughter Facility for Independent Meat Producers in North Carolina, Smithson Mills for NC DA&CS, February 2007.

State and County Quick Facts: Watauga County, North Carolina. U.S. Census Bureau, 2008. <http://quickfacts.census.gov/qfd/states/37/37189.html>

Watauga County Office of Economic Development website (<http://wataugaedc.org>)

APPENDIX VII
SUMMARY FOOD AND FARM ASSESSMENT
(ASAP Report)



Food and Farm Assessment: Watauga County, North Carolina

Prepared for: Watauga County Soil and Water

By: Appalachian Sustainable Agriculture Project (ASAP)
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June 30, 2010

Watauga County Demographics

- Watauga County has a population of 45,479.¹ Watauga County is situated in the High Country region of Western North Carolina. The High Country has a population of over 200,000.²
- Boone, the county seat, has a population of 14,942.³
- Boone is home to Appalachian State University, which has a student population of over 15,000 and faculty and staff population of over 700.
- Watauga County is also home to Beech Mountain and Blowing Rock, which have significant population swells during particular times of the year. Beech Mountain has a full-time population of 350; the population increases to as high as 10,000 during the winter for skiing and 5,000 in the summer for other recreational opportunities.⁴ Blowing Rock has a year-round population of 1,425 and about 8,000 summer residents.⁵
- The per capita income in Watauga County in 2007 was \$30,568⁶; in Western North Carolina, it was \$25,600.⁷
- According to the US Census, 81.6% of Watauga County residents completed high school in 2000; 33.2% had a bachelor's degree or higher.⁸ For Western North Carolina, 30.7% had completed a high school degree; 18% had a bachelor's degree or higher.⁹
- In 2008, 18.9% of the Watauga County population lived below poverty level¹⁰ compared with 12.3% in Western North Carolina.¹¹

¹ US Census Bureau, State and County QuickFacts, Watauga County, North Carolina, Population 2009 Estimate

² North Carolina Rural Economic Development Center, Rural Data Bank, Custom Data Search

³ Town of Boone, NC, townofboone.net

⁴ Town of Beech Mountain, NC, townofbeechmountain.com

⁵ Town of Blowing Rock, NC, townofblowingrock.com/history

⁶ US Census Bureau, North Carolina QuickLinks, North Carolina, Watauga County

⁷ Advantage West Economic Development Group

⁸ US Census Bureau, State and County QuickFacts, Watauga County, North Carolina

⁹ North Carolina Rural Economic Development Center, Rural Data Bank, Custom Data Search

¹⁰ US Census Bureau, State and County QuickFacts, Watauga County, North Carolina, Persons living below poverty level, 2008

¹¹ North Carolina Rural Economic Development Center, Rural Data Bank, Custom Data Search, Custom Data Search, Poverty rate 2000

- Tourism is a major economic driver in Watauga County and in the High Country region. In 2008, Watauga County ranked 18th in travel impact among North Carolina's 100 counties. Tourism in Watauga County generated \$189.76 million in 2008.¹² Watauga County is close to major outdoor attractions, including the Blue Ridge Parkway and Grandfather Mountain.
- Watauga County is within 30 miles of the Tennessee-Virginia Tri-Cities region, which has a population of nearly 600,000.¹³

Agriculture in Watauga County, North Carolina

Watauga County has 587 farms and 45,782 acres of farmland.¹⁴ The average farm size is 78 acres; more than half operate on fewer than 50 acres.¹⁵ In 2007, the value of agricultural products sold was \$11,529,000.¹⁶ Table 1 provides a breakdown of farms by size and year.

Table 1: Average Farm Size and Number of Farms by Size and Year, Watauga County				
	2007	2002	1997	1992
Average size of farm acres	78	71	84	69
# of farms by size				
1 to 9 acres	62	101	125	139
10 to 49 acres	264	300	264	244
50 to 179 acres	213	270	220	231
180 to 499 acres	41	53	51	53
500 to 999 acres	2	5	8	3
1,000 acres or more	5	2	6	3
	587	731	674	673

Source: 2007 Census of Agriculture

Current Production

The total land area in Watauga County is 200,006 acres.¹⁷ In 2007, almost a quarter of that land area – 45,782 acres – was farmland. Thirty-seven percent is classified as woodland, 29% as pasture, 26% as cropland, and the remaining 8% as “other uses.”¹⁸ Table 2 provides a

¹² North Carolina Department of Commerce, Tourism Services

¹³ The Regional Alliance for Economic Development Northeast TN Southeast VA

¹⁴ 2007 Census of Agriculture, County Summary Highlights, Watauga County

¹⁵ Ibid

¹⁶ 2007 Census of Agriculture, State and County Profiles, North Carolina, Watauga County

¹⁷ 2007 Census of Agriculture, County Summary Highlights, Watauga County

¹⁸ 2007 Census of Agriculture, State and County Profiles, North Carolina, Watauga County

breakdown of Watauga County farms by category of farm products and shows the value of agricultural products sold for 2002 and 2007.¹⁹ While some of the data for specific crops is not available, the table clearly shows the importance of cut Christmas trees and other short-rotation woody crops, which comprised a little more than 36% of the total value of agricultural products produced in 2007. This figure is nearly double the 2002 agricultural value. The agricultural value of vegetables also doubled from 2002 to 2007, from \$115,000 to \$259,000.

Table 2: Breakdown of farms by category of farm product (include non-food farm crops) Value of agricultural products sold (total and by category), Watauga County				
	2007	2007	2002	2002
		\$		\$
Average per farm		\$19,641		\$15,889
	2007	2007	2002	2002
	# of farms	\$ (thous.)	# of farms	\$ (thous.)
Total sales	587	11,529	731	11,615
Crops, including nursery and greenhouse	256	(D)	390	6,853
Grains, oilseeds, dry beans, and dry peas	12	8	1	(D)
Corn	12	8		
Tobacco	11	(D)	185	1,703
Vegetables, melons, potatoes, and sweet potatoes	52	259	40	115
Fruits, tree nuts, and berries	25	250	14	(D)
Nursery, greenhouse, floriculture, and sod	46	(D)	72	2,187
Cut Christmas trees and short-rotation woody crops	73	4,196	84	2,233
Other crops and hay	105	269	98	263
Livestock, poultry, and their products	312	(D)	380	5,032
Poultry and eggs	10	24	7	521
Cattle and calves	264	(D)	341	4,048
Milk and other dairy products from cows	1	(D)	4	355
Hogs and pigs	4	7		
Sheep, goats, and their products	21	32	20	15
Horses, ponies, mules, burros, and donkeys	28	40	27	79
Aquaculture	1		(D)	
Other animals and other animal products	23	12	13	13
Value of agricultural products sold directly to individuals for human consumption	33	88	35	93

Source: USDA Census of Agriculture, 2007

¹⁹ Withheld to avoid disclosing data for individual farms

Trends in Farming and Farmland

Table 3 shows trends in farm numbers and farmland acreage in Watauga County. Farm numbers increased from 673 in 1992 to 731 in 2002 and then sharply decreased to 587 farms in 2007 (a 20% loss). While there was a net increase in acres of farmland between 1992 and 2002, farmland has steadily declined since 1997. In comparison, from 2002 to 2007, North Carolina as a whole lost 1,017 farms (2%) and 536,383 acres (6%). Western North Carolina lost 679 farms (6%) and 115,447 acres (11%). The biggest losses in total number of farms (in order) were in Wilkes, Yancey, Madison, Watauga, and Buncombe. The biggest losses of acreage (in order) were Buncombe, Madison, Wilkes, and Henderson.

Table 3: Number of Farms and Acres of Farmland, Watauga County				
	2007	2002	1997	1992
# of farms	587	731	674	673
# of acres of farmland	45,782	51,758	56,508	46,726

Source: 2007, 2002, 1997, 1992 Census of Agriculture, County Summary Highlights

Significantly, the counties with the biggest losses in farm numbers in Western North Carolina are also the counties with the biggest losses in farmers growing tobacco (in order): Madison, Buncombe, Yancey, Ashe, and Watauga. In Watauga County, the number of farms producing tobacco decreased from 187 farms producing on 495 acres in 2002 to 11 farms producing on 24 acres in 2007.²⁰

The Tobacco Buyout and Related Shifts in Production

The single largest influence on the Western North Carolina farm economy in recent years is commonly referred to as the 2004 tobacco buyout. The buyout refers to the Fair and Equitable Transition Act passed by Congress on October 22, 2004. The legislation eliminated federal price support and supply control programs, which had regulated tobacco production and marketing since the Great Depression era. It opened tobacco to an unregulated, free market system beginning with the 2005 crop. Partial effects of the buyout began in the mid-1990s with growers anticipating the end of federal tobacco support as well as quota cuts and falling prices. Payments to growers and quota owners under the tobacco buyout are scheduled to take place over ten years, which means that the full effects of the buyout will not be known for some time.

While farms in Watauga County have been significantly impacted by the tobacco buyout, in the context of increasing demand for local food, farms in Watauga County have opportunities to shift out of tobacco production into alternative crops and into local market outlets.

²⁰ Table 26. Field Crops: 2007 and 2002, County Level Data, North Carolina, 2007 Census of Agriculture

Aging of the Farm Population

According to the USDA, the average age of farmers has increased every year since 1978. The average age of all U.S. farm operators has been greater than 50 years of age since at least the 1974 census. Between 2002 and 2007, the national average increased from 55.3 years of age to 57.1 years of age.²¹ Similarly, the average age of farm operators in Watauga County increased from 57.1 years of age in 2002 to 59.3 years of age in 2007.²²

Definite relationships exist between age of farm operator and particular farm characteristics. For example, family farms typically have older farm operators than corporate farms, and farms in smaller income classes typically have older farm operators than larger income class farms.²³ With the concentration of small family farms in the region, it is not surprising that the average operator age in Watauga County is higher than the national average.

Beginning in 2002, the USDA began gathering additional information about farm operator characteristics to help clarify issues related to the aging of the farm population, such as farm succession plans and the extent to which young farmers are replacing older farmers as they retire from farming. The new data indicates that only about 9% of all farms nationwide have multiple operators from different generations working on their farms as farm operators. The likelihood of having multiple operators is significantly lower for lower income class farms that predominate in this region.

Consolidation in the Food System

Over the past four decades, concentration in the ownership and management of food production and marketing has dramatically restructured the agricultural and food industries in the U.S. and globally. Horizontal and vertical integration, mergers and acquisitions, and the use of supply chain management strategies are the mechanisms by which change has occurred.²⁴ The result is that fewer but larger companies have come to dominate each stage of production, processing, and distribution. Consolidation in retail and wholesale markets makes it increasingly difficult for small farmers to maintain their market share.

²¹ *Farmers by Age*, 2007 Census of Agriculture

²² Table 46. Selected Operation and Operator Characteristics: 2007 and 2002, County Level Data, North Carolina, 2007 Census of Agriculture

²³ *What We Know About the Demographics of U.S. Farm Operators*, 2005, National Agricultural Statistics Service, USDA

²⁴ For a fuller discussion of these issues, see *The Infrastructure of Food Procurement and Distribution in Growing Local: Expanding the North Carolina Food and Farming Economy*, Appalachian Sustainable Agriculture Project, 2007

Opportunities in Local Markets

Despite these trends, significant opportunities exist for Watauga County producers in local markets. Small farms, like those in Watauga County, have largely been excluded from the trend favoring fewer, larger farms and fewer, larger markets. Local markets present small producers, in particular, with increased market options, and they offer markets that are less vulnerable to global price fluctuations.

ASAP's 2007 study on the food and farming economy of the 23 counties of Western North Carolina quantified demand for locally grown fresh fruits and vegetables at that time to be \$36 million per year and as high as \$452 million for all locally grown foods.²⁵ Consumer surveys not only demonstrated strong demand, they suggested the willingness of consumers in Western North Carolina to pay more for local food. For the vast majority of consumers surveyed, local food offered a fresher, tastier option to foods produced in more distant regions, as well as a way to support local farmers, local communities, a healthy environment, and the rural character of the region.

These attitudes are supported by national market research by the Hartman Group and JWT Advertising, which have identified local as one of the food attributes most highly valued by consumers nationwide. These marketing experts have predicted that consumer demand will shift from organics to locally sourced food. The research group, Packaged Facts, has predicted that the market for locally grown food is going to reach \$7 billion in 2011.

Consumer Food Spending and Consumption Figures for Watauga County

Consumer Spending

Watauga County residents spent \$105,165,639 on food in 2009.²⁶ The average household spent \$3,311 on groceries and \$2,470 on food consumed in other places that year. For Watauga County, where 45,479 residents equals an 18191.6 households, this figure breaks down into \$60,232,387 spent on food consumed at home and \$44,933,252 spent on food consumed away from home. A little less than three quarters of all away-from-home food spending typically occurs in restaurants.²⁷

²⁵ With the growth in popularity and demand for local food in the last half decade, these estimates are likely lower than the current potential.

²⁶ Calculations based on the *2007 Consumer Expenditure Survey*, Bureau of Labor Statistics. Calculations use per consumer unit estimates for the South region of the U.S.

²⁷ Table 3 in *Food Away from Home. Total Expenditures*. Food CPI and Expenditures Briefing Room. Economic Research Service, USDA

Demand for local food and farm products will be a subset of these figures, though actual consumer spending on local food and farm products is difficult to calculate. The USDA collects limited data on sales from farmers to consumers and no data at all regarding sales from farmers to businesses, organizations, or institutions in specific geographic areas.

Consumption Estimates

Tables 4 through 7 show consumption estimates in different product categories in Watauga County. Table 4, beginning with Column 1, shows consumption estimates in pounds for selected fresh fruits and vegetables. Column 2 shows acreage needed to grow those amounts, and Column 3 shows how many acres are devoted to growing the crops in the county. Acreage data should be viewed with caution. In some cases, the USDA suppresses county-level data; for example, when production is limited or only one or two farms report growing a particular crop. In other cases reported acreage may be higher than actual acreage because of formulas used by the USDA to create county profiles that are based on limited information.

Table 4: Comparison of Consumption and Production of Selected Fresh Fruits and Vegetables Grown in Watauga County			
	Column 1: Lbs consumed (rounded to the nearest hundredth)	Column 2: Acres needed to produce that amount	Column 3: Acres devoted to the crop
Apples	730,800	28	45+
Asparagus	53,300	-	2+
Beans (Snap)	95,400	18	6+
Blueberries	36,200	4	3+
Broccoli	268,500	42	-
Cabbage	370,200	14	-
Carrots	364,700	16	-
Cauliflower	71,000	10	-
Corn (Sweet)	416,300	42	5+
Cucumbers	304,600	23	1+
Grapes	385,500	44	1+
Lettuce (Head)	762,500	32	-
Lettuce (Romaine)	502,100	-	-
Peaches	229,100	18	2+
Peppers (Bell)	445,200	42	-
Potatoes	1,658,700	103	33+
Spinach	73,200	6	-
Strawberries	291,500	25	-
Tomatoes	836,100	35	5+
Watermelons	698,300	28	-
Squash	188,500	8	1+
Pumpkins	220,600	7	4+

Source: (Column 1) ERS/USDA Data Food Availability (Per Capita) Data System: Food Guide Pyramid (2008); (Column 2 and Column 3) 2007 Census of Agriculture

Table 5 shows figures for meat consumption in Watauga County. While the production of beef exceeds consumption, the majority of Watauga County beef production is in cow/calf operations. However, shifts are occurring in Western North Carolina to grass-fed, artisanal, and niche markets. Four Watauga County farms listed in ASAP's Local Food Guide raise beef for local markets.

Access to a government-inspected processing facility is the principal infrastructure obstacle for any type of meat, but grass-fed and grass-finished beef also require land for pasture, on-farm animal handling facilities, and adequate cold storage for processed meat products. To shift into this type of production, cow/calf producers would need to learn and adopt new practices, including more closely managed grazing and pasture management.

Table 5: Consumption of Meat in Watauga County		
	Lbs. Consumed (2008) (rounded to nearest hundredth)	Lbs. Produced (2008) (rounded to nearest hundredth)
Beef	4,135,400	4,154,700
Chicken (broilers)	4,411,100	2,100
Pork	2,847,300	21,200
Lamb	49,700	9,600
Turkey	795,400	900

Source: 2007 Census of Agriculture

Table 6 shows that an estimated 228,100 pounds of milk were produced in Watauga County in 2007. Some portion of that amount is marketed as fluid milk and some is used to make cheese and other processed dairy products. No information is available from government sources detailing the end uses of milk produced in the county.

Table 6: Consumption of Dairy Products in Watauga County		
	Lbs. Consumed (2008) (rounded to nearest hundredth)	Lbs. Produced (2008) (rounded to nearest hundredth)
Fluid Milk	8,094,600	228,100
All cheese	1,351,400	N/A
All frozen dairy	1,129,900	N/A
Yogurt	533,300	N/A
Butter	226,000	N/A

Source: 2007 Census of Agriculture

Table 7 shows the consumption of processed fruits and vegetables in Watauga County. With strong demand for ready-to-eat foods, processing fruits and vegetables for local sale may be one way to expand local consumption of local farm products.

Table 7: Consumption of Selected Categories of Processed Fruits and Vegetables in Watauga County	
Processed fruits	Lbs. Consumed (2008) (rounded to nearest hundredth)
Canned apples/applesauce	199,300
Canned peaches	134,700
Apple juice	1,160,600
Frozen berries	153,700
Canned pears	101,200
Grape juice	223,700
Other processed fruits	3,594,900
Processed vegetables	-
Canned tomatoes	3,037,200
Canned cucumbers (pickles)	160,400
Canned snap beans	149,600
Canned carrots	43,400
Other canned vegetables	912,100
Frozen vegetables	3,443,900
Dehydrated vegetables	1,342,300

Source: ERS/USDA Data Food Availability (Per Capita) Data System: Food Guide Pyramid

Local Production Limits

There is an upper limit to the amount of produce retail food stores can source from regional growers based on climate and soil related limitations. Watauga County farmers could not supply 100% of produce to local retailers because they cannot grow oranges, lemons, or bananas, for example, no matter how much local food infrastructure is improved. They can, however, grow each of 38 different types of fruits and vegetables that accounted for 80% of produce sales in retail outlets nationwide in 2005. In Table 8 those 38 items are listed along with their corresponding share or percentage of total retail produce sales.

Based on the table, an adjustment for seasonality would be to say that Watauga County farmers could grow 80% of retail produce items for a third of the year, or 26% of the total ($80\% \times 33\% = 26\%$). In other words, farmers can grow all of the items listed in the table below, but some only in the four months of the summer season and others only in the winter season. Some items, like apples, can be supplied to local markets for more than four months and others for less. Without being able to calculate exactly how many months each item would be available to local markets, the 26 percent ratio is intended to provide a reasonable adjustment for the seasonality of production in the region.

Table 8: \$ Share of Retail Produce Sales for Selected Fruits and Vegetables

Vegetables	% of Total Produce Sales in 2005	Vegetables (Continued)	% of Total Produce Sales in 2005	Fruits	% of Total Produce Sales in 2005
Asparagus	1.3	Mushrooms	2.3	Apples	7.7
Beans	1.1	Onions	4.2	Berries	6.3
Broccoli	1.9	Parsnip	0.1	Cherries	1.6
Beets	0.1	Peas	0.3	Grapes	7.3
Cabbage	0.7	Peppers	3.2	Nectarines	1
Carrots	3.2	Potatoes	5.8	Melons	5.3
Cauliflower	0.7	Pumpkins	0.2	Peaches	1.5
Celery	1.6	Radishes	0.4	Pears	1.2
Corn	1.2	Roots	0.1	Plums	0.8
Cucumbers	1.8	Spinach	0.7		
Eggplant	0.2	Sprouts	0.2		
Garlic	0.4	Squash	1.5		
Greens	0.3	Sweet potatoes	0.8		
Leeks	0.1	Tomatoes	8.5		
Lettuce	4.1				
Column Totals	18.7		28.3		32.7
Total share of produce accounted for by fruits & vegetables that can be grown in Watauga County: 79.7%					

Source: Fresh Look Marketing, <http://www.freshlookmarketing.com> (reported by Produce Marketing Association)

KEY RECOMMENDATIONS FOR WATAUGA COUNTY

1. Promote Watauga County farms and food. Demand for local can only be realized if consumers can find and identify local products. In the context of increasing interest and demand, marketing and promotion through advertisements, in-store promotional materials, through packaging and labeling, and other forms of promotion is a critical element. The results of ASAP's consumer research in Western North Carolina clearly shows that consumers will buy more local if it is labeled local and furthermore, they will pay more for it. ASAP's Appalachian Grown™ regional branding and certification program provides farms with a means to enhance the visibility of their products in local markets and accordingly, their ability to compete more effectively. ASAP's Appalachian Grown region includes Watauga County.
2. Provide training and support to Watauga County farmers. To access local market opportunities, farmers need specific types of assistance and information. For small and larger scale markets, direct marketing and indirect marketing, farmers need to develop skills in business planning and market planning. Business planning and market planning in particular are key strategies to mitigating the risk of entering and expanding into new market outlets. Furthermore, farmers need assistance determining what types of market outlets are a good match for the capacity of their farm. For retail and institutional outlets in particular, farmers need information specific to market requirements (packaging and labeling, liability insurance, delivery, food safety certifications) and assistance developing relationships with buyers.

Another risk management strategy for farms to consider is market diversification. From an economic standpoint, a market diversification strategy where producers sell into a variety of market outlets makes business sense. In times of economic strife and in the context of market fluctuations, farms selling into a diversity of market outlets are going to be more resilient.

3. Support direct-to-consumer market outlets. Direct markets provide the highest return to farmers in comparison to other markets, they provide an easy entry point for farmers new to marketing because of the minimal cost required for entry, and in providing a direct connection between consumer and farmer they cultivate customer loyalty and advocacy for local farms and food. ASAP surveys of farmers' market shoppers demonstrate that the markets are supported by an increasing base of repeat customers who shop there not just for food but for the experience of interacting directly with the people that grow their food and for a sense of community. Between 2002 and 2010, the number of farmers markets and CSAs in the Southern Appalachian region has increased about 80 percent. This statistic echoes the data from the 2007 Agricultural Census, which shows a 49 percent increase in direct food sales to \$1.2 billion in 2007 from \$812 million in 2002. Support might be in the form of the promotion of existing direct-to-consumer outlets—tailgate markets, CSAs, on-farm stores

and stands; workshops and training for farmers on relevant topics—salesmanship and display, best food safety practices, food regulation, marketing and promotion, etc; or in the form of assistance with the expansion of outlets.

4. Highlight and develop connections between farms and restaurants. The High Country has a vibrant independent restaurant sector and increasing interest by chefs in sourcing fresh, local food. Building on this interest, ASAP is currently completing the publication of a High Country Mixing Bowl. The Mixing Bowl is a farm to business trade directory that connects local farms to chefs and other foodservice personnel; it provides a practical means for farms to market their products and for restaurants to source local ingredients (see www.buyappalachian.org/mixingbowl for the online version). Other efforts focused on deepening connections between local farms and restaurants might include a farm to chef promotional campaign using ASAP's Appalachian Grown branding and Get Local marketing materials, farm fieldtrips for chefs and foodservice, and farmer-buyer meetings. The combination of these activities will simultaneously connect local farms to this market sector, increase the visibility of local food in the community and build awareness, and provide farmers and chefs with practical information about how to build business relationships that last.
5. Explore the viability of larger scale retail market outlets. There is a practical limit to how much food can be sold through direct market outlets; the largest share of consumers' food spending will continue to be in grocery stores and supermarkets. Western North Carolina has several grocery store chains with local food purchasing programs. Equipped with the knowledge of market standards and desires, these larger scale outlets provide Watauga County farms with potential marketing options. Food City, another supporter of local farms, has at least nine locations in the Tri-Cities region, and their distribution warehouse is located within 60 miles of Boone in Abington, Virginia.
6. Explore the viability of institutional market outlets including public schools, hospitals, and colleges. With the growth of the local food movement, there has been increasing interest by schools, hospitals, and colleges in providing fresh, local options to students, staff, patients, and employees. Institutional market settings like schools and hospitals provide opportunities to highlight the connections between food, food access, and health; nurture healthy eating habits in kids and families; and over the long term build support and appreciation for local farms and food. Moreover, schools and hospitals, because they reach broad constituencies and reach across socioeconomic and other cultural lines, provide opportunities to increase the distribution of fresh, local food to vulnerable children and families. Public schools in particular provide farms in rural settings with market options. Rural areas often lack sufficient market outlets but school systems exist in every county and have the potential to provide a steady market for farmers.

As a market venue for farmers, institutional markets should be part of an overall strategy of market diversification. Institutional markets can not only be difficult for farms to access because of specific institutional and infrastructure requirements, they can be less profitable to individual farms because often there is a middleman involved.

Two institutional outlets in the High Country, Appalachian State University (ASU) and Blue Ridge Regional Hospital, have expressed interest in sourcing local food. ASU is working now with New River Organic Growers (NROG) to source produce for the cafeteria.

7. Promote Watauga County food and farms to tourists. Tourism is a major economic driver in Watauga County, generating an economic impact of nearly \$190 million in 2008. While promoting experiences that bring agriculture and tourism together—agritourism—is not a new idea, an expanded notion of agritourism includes experiences with the region’s agriculture that happen off-farm as well as on-farm. Off-farm connections might involve eating at a restaurant or staying at a Bed & Breakfast that features locally-grown food, attending a festival or event celebrating regional cuisine, or traveling a scenic trail through the region’s farmland. These kinds of experiences are important because, while not all farms can welcome tourists to their farm for events and activities, all farms can benefit the visibility and excitement generated.
8. Investigate the types of assistance and resources available through farm support services and relevant nonprofits in the region.